84, 90 High Street East, 17, 19 Ann Street and Part of 91 Park Street East, Mississauga, Ontario

Phase Two Environmental Site Assessment

Client:
10 WEST GO GP Inc.
141 Lakeshore Road East
Mississauga, Ontario
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Attention: Mr. Anthony Di Santo

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Phase Two Environmental Site Assessment

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Appendices

1. Executive Summary

EXP Services Inc. (EXP) was retained by 10 WEST GO GP Inc. (Client) to complete a Phase Two Environmental Site Assessment (ESA) of the property with the municipal address 84, 90 High Street East, 17, 19 Ann Street and Part of 91 Park Street East with no municipal address, Mississauga, Ontario (hereinafter referred to as the 'Site').

The Site is located on the west side of Hurontario Street and is bound by High Street East, Park Street East and Ann Street. The Site has an area of approximately 0.75 hectares (1.85 acres). The Site has an area of approximately 0.75 hectares (1.85 acres) and is currently occupied by one (1) residential building being used for commercial purposes, three (3) residential buildings and a landscaped park on the northeast portion of the Site. The areas surrounding the Site consist of community property to the north, residential properties to the east, commercial properties to the south and west.

This Phase Two ESA was conducted in accordance with the Phase Two ESA standard defined by Ontario Regulation 153/04, as amended (O.Reg.153/04); and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Section 8 of this report.

Based on the current land use (parkland, residential and commercial) and proposed development (mixed residential and commercial) of the Site, Record of Site Condition (RSC) is required in support of proposed development. Please notes that the park lot (Part of 91 Park Street East) will not be changed to more sensitive land use (mixed residential and commercial). Therefore, RSC is not required for the park lot (Part of 91 Park Street East).

The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by EXP, dated January 12, 2021, as well as the two (2) additional APECs identified during this Phase Two ESA.

The APECs identified in the Phase One ESA and during this Phase Two ESA are outlined in the table below.

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[1]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1*: Fill of Unknown Quality	Southern and Western Portions of the Site	PCA1: # 30 Importation of Fill Material of Unknown Quality	On-Site	PAHs and Metals, B-HWS, Cr (VI), Hg, As, Sb, Se	Soil
APEC 2**: Application of De-icing and Salting Substances in the Driveways	Southern Portion of the Site	PCA2: # Other – Use of De-icing and Salting Substances	On-site	Soil: EC and SAR	Soil
APEC 3: Lumber yard located to the immediate north of the site, including chemical	Northern Portion of the Site	PCA 3: #59 – Wood Treating and Preservative Facility and Bulk	Off-Site	Metals, As, Sb, Se, Cr(VI), Hg, chlorophenols (CPs), Volatile	Groundwater

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[1]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
extraction (88 Park Street East)		Storage of Treated and Preserved Wood Products		Organic Compounds (VOCs)	
APEC 4: AST at neighbouring property (80 High Street East)	Western Portion of the Site	PCA 11: #28-Gasoline and Associated Products Storage in Fixed Tanks (PCA 8)	Off-Site	PHCs, BTEX	Groundwater

*Fill material was encountered at the boreholes in the southern and western portions of the Site during the Phase Two ESA.

** The southern portion of the site was developed with private driveways; de-icing and salting substances were thought to be routinely applied throughout the driveways surface, during the winter months for vehicular and pedestrian safety. The use of road salt at the Site is considered a PCA, leading to an APEC.

(1) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg 153/04, as amended) that is occurring or has occurred in a phase one Study area.

Based on the findings of the Phase One ESA and conclusions, a Phase Two ESA was recommended to assess the soil and groundwater conditions at the Site.

The scope of the Phase Two ESA was designed to assess soil and groundwater quality associated with the identified APECs. The results and findings of the Phase Two ESA conducted at the Site are summarized as follows:

1. Between June 28, 2021 and July 8, 2021, twelve (12) exterior boreholes (BH1, BH2, BH3D, BH3S, BH4, BH5D, BH5S, BH6, BH7, BH8, BH9 and BH10), in conjunction with geotechnical and hydrogeological investigations, were advanced by Davis Drilling Ltd. to a maximum depth of 15.9 m metres below ground surface (m bgs) under the supervision of EXP.
2. Eight (8) groundwater monitoring wells (MW1, MW2, MW3D, MW3S, MW5D, MW5S, MW6 and MW7) were installed at six (6) locations. Of all the monitoring wells, MW 1, MW3D and MW5D/MW5S were sampled between July 15 and July 16, 2021, as part of this Phase Two investigation. The remaining monitoring wells were part of the geotechnical and hydrogeological investigations, however, they were utilized to determine the groundwater flow directions for this Phase Two ESA.
3. The general stratigraphy at the Site, as observed in the boreholes, consisted of asphalt/topsoil at the surface generally overlying layers of fill/reworked native, followed by sandy silt and clayey silt till. Bedrock was encountered at depths ranging from 7.44 mbgs and 9.14 mbgs.
4. Groundwater levels were measured on July 15, 2021. Based on the groundwater contour map for the Site, the shallow groundwater is anticipated to flow in a westerly direction, while the deep groundwater is anticipated to flow in an easterly to southeasterly direction. However, EXP notes that the direction of localized groundwater flow may be influenced by disturbed soil (fill), underground utilities and/or underground building structures in the area. As such, the measured groundwater flow direction may not be representative of the regional area.
5. Soil samples were submitted for the analysis of polycyclic aromatic hydrocarbons (PAH), Metals and/or Inorganics, pH and grain size.

6. The analytical results of the tested parameters in the soil samples were either not detected or detected below the Table 2 SCS. The laboratory RDLs were below the Table 2 SCS.
7. Groundwater samples were submitted for the analysis of Petroleum Hydrocarbons (PHCs) and volatile organic compounds (VOCs), metals and/or inorganics and Chlorophenols (CPs).
8. The analytical results of the tested parameters in the groundwater samples were either not detected or detected below the Table 2 SCS. The laboratory RDLs were below the Table 2 SCS.
9. No evidence of free product (i.e. visible film or sheen), or odour was observed during soil sampling, groundwater purging, or groundwater sampling activities.

It should be noted that monitoring well MW5S remained dry during the groundwater sampling events on July 15 and July 16, 2021. As such, groundwater samples could not be obtained from this monitoring well. The nested deep monitoring well (MW5D) installed as part of the geotechnical and hydrogeological investigations was utilized for this investigation, as an alternative groundwater sampling location.

Based on the findings of the Phase Two ESA, no further environmental investigation is required.

2 Introduction

EXP Services Inc. (EXP) was retained by 10 WEST GO GP Inc. (Client) to complete a Phase Two Environmental Site Assessment (ESA) of the property municipally addressed as 84, 90 High Street East and 17, 19 Ann Street, Part of 91 Park Street East, Mississauga (hereinafter referred to as the 'Site'. The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by EXP, dated January 12, 2021, as well as two (2) additional APECs identified in this Phase Two ESA.

This Phase Two ESA was conducted in accordance with the Phase Two ESA standard defined by Ontario Regulation 153/04, as amended (O.Reg.153/04); and in accordance with generally accepted professional practices. Subject to this standard of care, EXP makes no express or implied warranties regarding its services and no third-party beneficiaries are intended. Limitation of liability, scope of report and third-party reliance are outlined in Section 8 of this report.

Based on the current land use (parkland, residential and commercial) and proposed development (mixed residential and commercial) of the Site, Record of Site Condition (RSC) is required in support of proposed development. Please notes that the park lot (Part of 91 Park Street East) will not be changed to more sensitive land use (mixed residential and commercial). Therefore, RSC is not required for the park lot (Part of 91 Park Street East).

2.1 Site Description

The Site is located on the west side of Hurontario Street and is bound by High Street East, Park Street East and Ann Street. The Site has an area of approximately 0.75 hectares (1.85 acres) and is currently occupied by one (1) residential building being used for commercial purposes, three (3) residential buildings and a landscaped park on the northeast portion of the Site.

The areas surrounding the Site consist of community property to the north, residential properties to the east, commercial properties to the south and west.

2.2 Legal Description and Property Ownership

Details of the Site are outlined in the tables below. It is noted that the legal description is to be reconfirmed via a legal letter prepared by the Owner's lawyer, prior to the filing of RSCs.

Municipal Address	84, 90 High Street East, 17, 19 Ann Street and Part of 91 Park Street East
Current Land Use	Residential / Commercial / Parkland
Proposed Land Use	Mixed Commercial / Residential
Legal Description	PT LT 1, PL PC2 ECR, S/S PARK ST, PT 1 43R19415; SUBJECT TO AN EASEMENT IN GROSS OVER PT 1 PL 43R-33186 AS IN PR1856898; CITY OF MISSISSAUGA PT LT 1, PL PC2 ECR, S/S PARK ST AS IN RO660261; MISSISSAUGA PT LT 1, PL PC2 ECR, S/S PARK ST AS IN RO1128856; MISSISSAUGA PT LT 1, PL PC2 ECR, N/S HIGH ST AS IN RO768460; MISSISSAUGA PT LT 1, PL PC2 ECR, N/S HIGH ST AS IN RO998249; MISSISSAUGA

Property Identification Number (PIN)	13463-0014 (LT) 13463-0015 (LT) 13463-0016 (LT) 13463-0034 (LT) 13463-0035 (LT)
Approximate Universal Transverse Mercator (UTM) coordinates	NAD83 17T 614395 m E 4823552 m N
Accuracy Estimate of UTM	10-15 m
Site Area	0.75 hectares (1.85 acres)
Property Owners, Owner Contact and Address	**Property Owner:** 10 West Go GP Inc. and the Corporation of the City of Mississauga **Contact**: Mr. Anthony Di Santo **Address**: 141 Lakeshore Road East, ON L5G 1E8

2.3 Current and Proposed future Uses

At the time of the Phase Two ESA, the properties are residential/parkland/commercial lot. Reportedly, the Site is intended to be developed for residential land use.

2.4 Applicable Site Condition Standards

Analytical results obtained for Site soil and groundwater samples were assessed against Site Condition Standards (SCS) as established under subsection 169.4(1) of the Environmental Protection Act, and presented in the document MECP "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", ("SGWS" Standards), (MECP, 2011a). Tabulated background SCS (Table 1) applicable to environmentally sensitive Sites and effects based generic SCS (Tables 2 to 9) applicable to non-environmentally sensitive Sites are provided in MECP (2011a). The effects based SCS (Tables 2 to 9) are protective of human health and the environment for different groundwater conditions (potable and non-potable), land use scenarios (residential, parkland, institutional, commercial, industrial, community and agricultural/other), soil texture (coarse or medium/fine) and restoration depth (full or stratified).

Tables 1 to 9 of MECP (2011a) are summarized as follows:

- Table 1 – applicable to sites where background concentrations must be met (full depth), such as sensitive sites where site-specific criteria have not been derived;
- Table 2 – applicable to sites with potable groundwater and full depth restoration;
- Table 3 – applicable to sites with non-potable groundwater and full depth restoration;
- Table 4 – applicable to sites with potable groundwater and stratified restoration;
- Table 5 – applicable to sites with non-potable groundwater and stratified restoration;
- Table 6 – applicable to sites with potable groundwater and shallow soils;
- Table 7 – applicable to sites with non-potable groundwater and shallow soils;
- Table 8 – applicable to sites with potable groundwater and that are within 30 m of a water body; and,
- Table 9 – applicable to sites with non-potable groundwater and that are within 30 m of a water body.

For assessment purposes, EXP selected the Table 2 SCS for Residential/Parkland/Institutional Property Use in a potable groundwater condition for medium to fine textured soil. The selection of this category was based on the following factors:

- The Site was not identified as a sensitive Site as defined by O. Reg. 153/04 on the following basis:
    - The Site is not located on or within 30 metres from an area of natural significance as defined in O. Reg. 153/04.;
    - Measurements of soil pH at the Site were within the MECP acceptable range of 5 to 9 for surface soil and 5 to 11 for subsurface soil; and,
- The Site is not located within 30 metres of a water body.
- The predominant soil type on the Site is considered to be medium to fine textured (as per the soil description identified in the borehole logs in Appendix C, and the results of the 75 micron sieve result included in Appendix E).
- As per the requirements of Section 43.1 of O. Reg. 153/04, a property is considered to be a "shallow soil property" if 1/3 or more of the property consists of soil equal to or less than 2 m in depth beneath the soil surface. All of the boreholes advanced at the Site indicated an overburden thickness more than 2 m, and as such, the Site would not be considered as a "shallow soil property".
- The Site and all properties within 250 m of the Site are connected to the municipal water supply, which is taken from municipal wellheads located in Lake Ontario, approximately 350 m southeast of the Site.
- The Site is currently a residential/parkland/commercial lot and the proposed land use is residential use.
- There was no intention to carry out a stratified restoration at the Site.

3 Background Information

3.1 Physical Setting

The following physiographic, geological and soil maps were reviewed:

- "Toporama"; Natural Resources Canada. Map 30M11. Scale 1:15,000. 2008.
- Quaternary Geology of Ontario - geology_ll.shp [computer file], Ontario: Ontario Geological Survey, 2000.
- Bedrock Geology of Ontario - geology_ll.shp [computer file], Ontario: Ontario Geological Survey, 2000.

Based on the review of the above maps, the following information was obtained:

- The Site is approximately 83 m above sea level and is generally flat.
- The Lake Ontario is located approximately 350 m south of the Site. Based on local topography the inferred groundwater flow direction is expected to flow to the south toward Lake Ontario.
- The Site is expected to consist of Deltaic and Lacustrine Deposits predominantly gravelly sand and silty sand.
- The bedrock in the general area forms part of a group belonging to the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member and Eastview Member consisting of shale, limestone, dolostone and siltstone.

3.2 Previous Environmental Investigations

The following reports were made available to EXP at the time of this Phase One ESA.

- A report entitled "Phase I Environmental Assessment – 90 High Street East, Mississauga Ontario", dated May 3, 2017, prepared for Remax Realty Specialists Inc., Brokerage (Remax), by EXP Services Inc. A review of the report identified the following significant information:
    - Based on the age of the Site building it was considered possible for Polychlorinated Biphenyls (PCBs), Asbestos Containing Materials (ACMs), Lead, Ozone Depleting Substances (ODS) and mercury to be present within the Site building. It was recommended that a Designated Substance Survey be completed if renovations or demolition of the building is planned.
    - The review of the report did not identify any additional issues of environmental concern to the Site.

- A report entitled "Phase One Environmental Assessment – 90 High Street East, Mississauga Ontario", dated March 21, 2018, prepared for Remax Realty Specialists Inc., Brokerage (Remax), by EXP Services Inc. A review of the report identified the following significant information:
    - Based on the findings of the records review and Site visit, EXP identified twenty-three (23) Potentially Contaminating Activities (PCAs) for the Phase One Study Area. No PCAs were identified for the Site. Due to the separation distance from the Site, and/or the down/trans-gradient location relative to the direction of groundwater flow, no PCAs were identified that would have contributed towards an on-Site Area of Potential Environmental Concern (APEC). Therefore, at the conclusion of the Phase One ESA, no further environmental work was recommended for the Site.
- A report entitled "Phase One Environmental Assessment Letter Update – 90 High Street East, Mississauga Ontario", dated November 1, 2019, prepared for 10 West GO GP Inc., by EXP Services Inc. A review of the report identified the following significant information:
    - Based on the findings of the records review and Site visit, EXP identified twenty-three (23) Potentially Contaminating Activities (PCAs) for the Phase One Study Area. No PCAs were identified for the Site. Due to the separation distance from the Site, and/or the down/trans-gradient location relative to the direction of groundwater flow, no PCAs were identified that would have contributed towards an on-Site Area of Potential Environmental Concern (APEC). Therefore, at the conclusion of the Phase One ESA, no further environmental work was recommended for the Site.

- A report entitled "Phase One Environmental Assessment– 84 & 90 High Street East, 17 & 19 Ann Street and Park Lot, Mississauga Ontario", dated January 12, 2021, prepared for 10 West GO GP Inc., by EXP Services Inc. A review of the report identified the following significant information:
    - Based on the findings of the records review and Site visit, EXP identified twenty-nine (29) Potentially Contaminating Activities (PCAs) for the Phase One Study Area and no PCAs were identified for the Site. Two (2) of the off-Site PCAs (lumber yard located to the immediate north of the Site and an AST located west of the Site) were identified that would have contributed towards an on-Site Area of Potential Environmental Concern (APEC). The remaining twenty-seven (27) off-Site PCAs were not thought to contribute towards an on-Site Area of Potential Environmental Concern (APEC), due to the separation distance from the Site, and/or the down/trans-gradient location relative to the direction of groundwater flow. As such, a Phase Two ESA was recommended to assess the APECs, prior to filing an RSC.

4 Scope of Investigation

4.1 Overview of Site Investigation

The objective of the Phase Two ESA was to assess the APECs identified in EXP's (2021) Phase One ESA and during the Phase Two ESA, to obtain soil and groundwater data to further characterize the Site to support the filing of an RSC on the MECP's Environmental Brownfield Site Registry.

4.1.1 Scope of Work

The scope of work for the Phase Two ESA was as follows:

- Request local utility locating companies (e.g. cable, telephone, gas, hydro, water, sewer and storm water) to mark any underground utilities present at the Site;
- Retain a private utility locating company to mark any underground utilities present in the vicinity of the proposed borehole locations and to clear the individual borehole locations;
- Oversee a licensed drilling company to advance a total of twelve (12) exterior boreholes (BH1, BH2, BH3D, BH3S, BH4, BH5D, BH5S, BH6, BH7, BH8, BH9 and BH10) across the Site, in conjunction with geotechnical and hydrogeological investigations;
- Instrument eight (8) boreholes (BH1, BH2, BH3D, BH3S, BH5D, BH5S, BH6 and BH7) as groundwater monitoring wells, in conjunction with geotechnical and hydrogeological investigations;
- Collect representative soil samples from the boreholes for laboratory analysis of PAHs, metals (including As, Sb and Se), B-HWS, Cr(VI), Hg, cyanide, EC, SAR and pH;
- Develop all newly installed groundwater monitoring wells;
- Collect groundwater samples from the newly installed monitoring wells for laboratory analysis of PHCs including BTEX, VOCs, Chlorophenols, metals (including As, Sb and Se), Cr(VI), Hg and sodium;
- Complete an elevation survey of all newly installed monitoring wells to determine the groundwater flow direction in the groundwater unit(s) identified beneath the Site; and,
- Analyze the data and prepare a report of the findings, in accordance with O.Reg.153/04.

4.2 Media Investigated

The Phase Two ESA included the investigation of the Site soil and groundwater. As there were no surface water bodies on the Site, sediment sampling was not required.

4.3 Phase One Conceptual Site Model

The Phase One Conceptual Site Model (CSM) is incorporated into the Phase Two CSM, presented in Appendix F.

4.4 Deviations from Sampling and Analysis Plan

The field investigative and sampling program was carried out following the requirements of the Site Sampling and Analysis Plan (SAAP) presented in Appendix A. the following deviations from the original scope were identified during the soil and groundwater investigation:

- Monitoring well MW5S was dry during sampling events on July 15 and July 16, 2021. The deep monitoring well (MW5D) installed as part of the geotechnical and hydrogeological investigations was utilized for this investigation, as an alternative location.

4.5 Impediments

At the time of the Site investigation, there was no restrictions that did not allow for the completion of all proposed boreholes/monitoring well.

5. Investigation Method

5.1 General

The Site investigative activities consisted of the following:

- Borehole drilling to facilitate the collection of soil samples for geologic characterization and/or chemical analysis; and,
- Monitoring well installation for hydrogeologic characterization and the collection of groundwater samples for chemical analysis.

Boreholes were advanced in the overburden soils by a licensed drilling company under the full-time supervision of EXP staff. The drilling equipment used to advance the boreholes is described below. No petroleum-based greases or solvents were used during drilling activities.

Monitoring wells were installed in the boreholes by a MECP licensed well contractor in accordance with Ontario Regulation 903/90, as amended (O.Reg. 903) using manufactured well components (i.e. riser pipes and screens) and materials (i.e. sand pack and grout) from documented sources.

The approximate locations of the boreholes and monitoring wells are shown on Figures 5A-B.

5.2 Underground Utilities

Prior to the commencement of drilling activities, the locations of underground utilities including but not limited to cable, telephone, natural gas, electrical lines, water, sewer and storm water conduits were marked out by public locating companies. In addition, private utility locating services Premier Locates was retained to clear individual borehole locations.

5.3 Borehole Drilling

The fieldwork for the soil investigative portion of the Phase Two ESA was carried between June 28 and July 8, 2021. All boreholes were advanced under the full-time supervision of EXP staff.

A total of twelve (12) exterior boreholes (BH1, BH2, BH3D, BH3S, BH4, BH5D, BH5S, BH6, BH7, BH8, BH9 and BH10) were advanced by Davis Drilling Ltd. to a maximum depth of 15.90 m metres below ground surface (m bgs).

EXP continuously monitored the drilling activities to record the physical characteristics of the soil, depth of soil sample collection and total depth of boreholes. Field observations are summarized on the borehole logs provided in Appendix C. Representative soil samples were recovered from the boreholes continuously using split-spoon samplers or acetate liners.

All soil cuttings were stored in drums and removed off the Site.

5.4 Soil: Sampling

The soil sampling conducted during the completion of this Phase Two ESA was undertaken in accordance with the SAAP presented in Appendix A, to ensure that soil quality in each of the APECs identified in the Phase One ESA was characterized in accordance with O.Reg.153/04.

Soil samples for geologic characterization and chemical analysis were collected on a discrete basis in the overburden materials using conventional split spoon sampling equipment advanced into the subsurface using a truck-mounted drill rig. The soil cores were extruded from the samplers upon retrieval by drilling personnel. Geologic details of the recovered cores were logged by EXP field staff and samples were collected from selected cores for chemical analysis. Field observations are summarized on the borehole logs prepared from the field logs and provided in Appendix C.

Measures were taken in the field and during transport to preserve sample integrity prior to chemical analysis. Recommended volumes of soil samples selected for chemical analysis were collected from the recovered cores into pre-cleaned, laboratory-supplied glass sample jars/vials identified for the specified analytical test group. Samples intended for PHC fractions F1 and VOCs were collected using a laboratory-supplied soil core sampler, placed into the vials containing methanol for preservation purposes and sealed using Teflon lined lids.

Soil samples selected for laboratory analysis were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory Bureau Veritas Laboratories (BV Labs) of Mississauga, Ontario. The samples were transported/submitted within the acceptable holding time to BV Labs following Chain of Custody protocols for chemical analysis.

Decontamination and other protocols were followed during sample collection and handling to minimize the potential for sample cross-contamination. New disposable nitrile gloves were used for the handling and sampling of each retrieved soil core. The sampling equipment (i.e. split spoons) was decontaminated between borehole locations by the drilling contractor using a potable water/phosphate-free detergent solution followed by rinses with potable water and de-ionized water. Wash and rinse waters were collected in sealed, labeled containers. Drill cuttings were placed in labeled, sealed drums upon completion of sampling.

Soil samples submitted for specific chemical analysis were selected on the basis of visual inspection of the recovered cores, TOV readings, sample location and/or depth interval. The rationale for soil sample submission is presented in Table 3.

Soil samples were also collected and submitted for grain size analysis at the BV Labs.

Appropriate quality assurance/quality control (QA/QC) samples were collected during soil sampling, including field duplicate samples, as presented in Section 5.14 and Table 3.

5.5 Soil: Field Screening Measurements

Where required for the characterization of volatile parameters, a portion of each soil core was placed in a sealed plastic bag and allowed to reach ambient temperature prior to field screening, using an RKI Eagle II (RKI) device equipped with a Photoionization Detection (PID) instrument, calibrated with isobutylene and hexane gases. The measurements were made by inserting the instrument's probe into the plastic bag while manipulating the sample to ensure volatilization of the soil gases. These readings provide a real-time indication of the relative concentration of combustible vapours encountered in the subsurface during drilling and are used to aid in the assessment of the vertical and horizontal extent of volatile parameter contamination and the selection of soil samples for analysis.

The field screening measurements, in parts per million (ppm) isobutylene and hexane equivalents, are presented on the borehole logs in Appendix C. It should be noted that field measurements are for screening purposes only and the presence/absence of contamination is determined by laboratory analysis.

Each sample was additionally examined for visual, textural and olfactory classification at the time of sampling.

5.6 Groundwater: Monitoring Well Installation

A total of eight (8) monitoring wells (MW1, MW2, MW3D, MW3S, MW5D, MW5S, MW6 and MW7) were installed at borehole locations. The monitoring wells were installed in general accordance with the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - amended to O. Reg. 128/03, and were installed by licensed well contractors.

The monitoring wells consisted of a 3 m length, 51 mm diameter number 10 slot size (0.25 mm) PVC well screen and Schedule 40 PVC riser pipe. All pipe connections were factory machined threaded flush couplings. The annular space around the wells was backfilled with silica sand to an average height of 0.3 m above the top of the screen. A bentonite seal was added from the top of the sand pack to approximately 0.3 m below ground surface. The monitoring wells were completed with a flush-mount well casing.

Please note that clustered deep groundwater monitoring wells (MW3D and MW5D) were utilized to support the geotechnical and hydrogeological investigations. No groundwater samples were collected from these monitoring wells, with the exception of MW5D. MW5D was used as an alternate groundwater sampling location, due to MW5S being dry during groundwater sampling events on July 15 and July 16, 2021.

EXP continuously monitored the well installation activities. Well installation details are summarized in Table 4 and on the borehole logs provided in Appendix C.

When the monitoring wells are no longer required, they must be decommissioned in accordance with the procedure outlined in the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - amended to O. Reg. 128/03.

Measures taken to minimize the potential for cross contamination or the introduction of contaminants during well construction included:

- The use of well pipe components (e.g. riser pipe and well screens) with factory machined threaded flush coupling joints;
- Construction of wells without the use of glues or adhesives;
- Removing the protective plastic wraps from well components at borehole insertion to prevent contact with the ground and other surfaces; and,
- Cleaning of augers between sampling locations.

5.7 Groundwater: Monitoring Well Development

Following the installation of monitoring wells, the newly installed monitoring wells were developed to remove fine sediment particles from the sand pack and enhance hydraulic communication with the surrounding formation waters. The new monitoring wells were developed using dedicated low-density polyethylene (LDPE) tubing, equipped with an inertial foot-valve to disturb the water column and recover groundwater containing dislodged sediment particles. The wells were developed until approximately 3 to 5 well volumes of water were removed and/or until purged dry.

5.8 Groundwater: Purging and Field Measurements of Water Quality Parameters

At least 24 hours following the monitoring well development activities, the depth to groundwater at each monitoring well was measured utilizing an electronic water level meter obtained from Spectra Scientific Inc. (Spectra) of Brampton, ON. The water level measurements were recorded on log sheets or in a bound field book. The water level meter was decontaminated between monitoring well locations.

Prior to collecting groundwater samples, field measurements of water quality parameters were recorded from the monitoring wells utilizing low-flow purging and sampling methodologies. Groundwater was purged from each location using a Bladder Pump and dedicated LDPE tubing. Field measurements of dissolved oxygen concentration, electrical conductivity, oxidation-reduction potential, pH, temperature, turbidity and water levels were recorded at three (3) minute intervals during the purging activities using a pre-calibrated multi probe water quality meter, a turbidity meter and a water level meter. Groundwater was considered to be chemically stable when the pH measurements of three (3) successive readings agreed to within ± 0.1 pH units, the specific conductance within ± 10%, and the temperature within ± 10%. The multi-meter electrodes were calibrated prior to receipt of the meter by the supplier using in-house reference standards.

All development and purged water was collected and stored on Site in labeled, sealed containers, until properly managed or disposed off-Site.

Equipment used during groundwater monitoring were thoroughly cleaned and decontaminated between wells. Well purging details were recorded on log sheets or in a bound field book.

5.9 Groundwater: Sampling

The groundwater sampling conducted during the completion of this Phase Two ESA was undertaken in accordance with the SAAP presented in Appendix A, to ensure that the APECs identified in the Phase One ESA and during this Phase Two ESA were properly characterized, in accordance with O.Reg.153/04.

Upon completion of purging activities, groundwater samples were collected from monitoring wells. Recommended groundwater sample volumes were collected into pre-cleaned laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. The samples were placed in an insulated cooler pre-chilled with ice immediately upon collection. Samples for VOCs and/or PHC F1 analysis were collected in triplicate vials prepared with concentrated sodium bisulphate as a preservative. Each VOC/PHC vial was inverted and inspected for gas bubbles prior to being placed in the cooler to ensure that no head-space was present in the samples.

All groundwater samples were placed in clean coolers containing ice prior to and during transportation to the subcontract laboratory, BV Labs. The samples were transported/submitted following appropriate holding time requirements following Chain of Custody protocols for chemical analysis.

Decontamination and other protocols were followed during sample collection and handling to minimize the potential for sample cross-contamination. New disposable nitrile gloves were used at each monitoring well location.

Groundwater samples submitted for specific chemical analysis were selected on the basis of sample location and/or depth interval. The rationale for groundwater sample submission is presented in Table 5.

5.10 Sediment Sampling

As no water body was present at the Site, sediment sampling was not part of the Phase Two ESA.

5.11 Analytical Testing

The contractual laboratory selected to perform the chemical analyses was BV Labs, of Mississauga, ON. BV Labs is an accredited laboratory under the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories (Accredited Laboratory No. 97 and No. A3200, respectively) in accordance with ISO/IEC 17025:2005 – "General Requirements for the Competence of Testing and Calibration Laboratories".

5.12 Residue Management Procedures

The residue materials produced during the borehole drilling, soil sampling programs and monitoring well sampling programs comprised of soil cuttings from drilling activities, decontamination fluids from equipment cleaning, and waters from well development and purging. All soil cuttings were stored in drums on the Site. All development and purged water was collected and stored on-Site in labeled, sealed containers. All the soil cutting drums and purged water were removed and disposal by Davis Drilling Ltd on July 16, 2021.

5.13 Elevation Survey

An elevation survey was conducted during the Phase Two ESA investigative activities, with the purpose of obtaining relative vertical control of the monitoring well locations. The ground surface elevations of each borehole/monitoring completed on July 9, 2021 surveyed using a laser level survey. The City of Mississauga Vertical Benchmark No. 732 was used as a temporary benchmark and given an elevation of 78.128 m.

5.14 Quality Assurance and Quality Control Measures

Quality Control/Quality Assurance measures, as set out in the Sampling and Analysis Plan, were implemented during sample collection, storage and transport to provide accurate data representative of conditions in the surficial fill and upper overburden soils and the water table aquifer. The QA/QC measures included decontamination procedures to minimize the potential for sample cross contamination, the execution of standard operating procedures to collect representative and unbiased samples, the collection of quality control samples to evaluate sample precision and accuracy, and the implementation of measures to preserve sample integrity.

Decontamination protocols were followed during sample collection and handling to minimize the potential for cross-contamination. During the collection of soil samples, split-spoon and duel tube samplers were scraped and decontaminated between sampling intervals by washing with a potable water/phosphate-free detergent solution followed by a rinse with potable water. New disposable nitrile gloves were used for the handling and collection of samples from each soil core and for sample collection from each borehole.

Soil samples selected for chemical analyses were collected from the retrieved soil cores and placed directly into pre-cleaned, laboratory-supplied glass jars or vials. Sample volumes were consistent with analytical test group requirements as specified by the receiving laboratory.

Groundwater samples were collected into pre-clean laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. Recommended analytical test group specific sample volumes were collected as specified by the contractual laboratory. Sample vials for analysis of PHC F1 (BTEX) and VOCs were inspected for the presence of gas bubbles and the presence of head space, where volatiles may partition into.

Measures were followed to preserve sample integrity between collection and receipt by the contractual laboratory. All samples, both soil and groundwater, immediately upon collection were placed in insulated coolers pre-chilled with ice for storage and transport to the contractual laboratory. Samples were received by the contractual laboratory within specific analytical test group holding time requirements.

Documentation procedures were followed to confirm sample identification and tracked sample movement. Each sample was assigned a unique identification ID number, which was recorded along with the date, time of sampling and requested analyses on labels affixed to the sampling containers, and in a bound field notebook. Chain of Custody protocols were followed to track sample handling and movement until receipt by the contractual laboratory. Field QA/QC samples were collected during the soil and groundwater sampling. Duplicate samples were collected to evaluate sampling precision to evaluate the potential for sample cross-contamination during handling and transport.

A total of two (2) field duplicates for soil sample, one (1) field duplicate for groundwater sample, and one (1) trip blank groundwater sample were collected during the Site investigation. A list of soil field duplicates is presented in Table 3. A list of groundwater field duplicate and trip blank is presented in Table 5.

6. Review and Evaluation

6.1 Geology

The soil investigation conducted at the Site for the environmental assessment in conjunction with the geotechnical and hydrogeological investigations, consisted of the advancement of twelve (12) exterior boreholes into the overburden materials to a maximum depth of 15.9 m bgs. The borehole logs describing geologic details of the soil cores recovered during the Site drilling activities are presented in Appendix C. Boundaries of soil indicated on the log sheets are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change.

The general stratigraphy at the Site, as observed in the boreholes, consisted of asphalt/topsoil at the surface generally overlying layers of fill/reworked native, followed by sandy silt and clayey silt till. Bedrock was encountered at depths ranging from 7.44 mbgs and 9.14 mbgs. A brief description of the soil stratigraphy at the Site, in order of depth, is summarized in the following sections. Refer to borehole logs provided in Appendix C for details of soil stratigraphy. The interpreted Site geology is also shown on the enclosed cross sections (Figures 17-18).

6.1.1 Surface Material

Asphalt was encountered at BH2, BH3D, BH3S, BH4, BH8 and BH9 with a thickness of ranging between 0.025 m and 0.05 m, overlaying layers of granular base with a thickness ranging between 0.125 m and 0.53 m.

Topsoil was encountered at BH1, BH5D, BH5S, BH7 and BH10 with thickness ranging between 0.15 m and 0.30 m.

Sandy silt was encountered at the surface of BH6, extending to a depth of 3.05 mbgs.

6.1.2 Fill Material

Fill was encountered in six (6) boreholes (BH3D, BH3S, BH4, BH8, BH9 and BH10). The fill typically consisted of brown clayey silt, sandy silt with trace clay, rootlets and black sand. This layer extended to depths varying from 0.90 to 2.57 m below the existing ground surface.

The reworked material was found below topsoil/asphalt (with granular base) in BH1, BH2, BH5D, BH5S, BH6 and BH7.

6.1.3 Native Material

Sandy silt was encountered in BH1 and BH3D, BH3S, BH5D, BH5S, BH7, below the fill material. The silty sand contained some clay and extended to depths varying from 1.52 m bgs to 2.29 m bgs.

Clayey Silt Till was encountered in BH1, BH2, BH3D, BH3S, BH4, BH5D, BH5S, BH6, BH8, BH9 and BH10 below the sandy silt layer of fill material. The clayey silt contained trace sand and gravel. This layer extended to depths varying from 7.44 m bgs to 9.14 m bgs.

6.1.4 Bedrock

Bedrock was encountered at depths ranging from 7.44 mbgs and 9.14 mbgs, at boreholes (BH1, BH2, BH3D, BH4, BH5D, BH6 and BH7).

6.2 Groundwater: Elevations and Flow Direction

The three (3) boreholes (BH2, BH3S and BH5S) instrumented with shallow groundwater monitoring wells and the five (5) boreholes (BH1, BH3D, BH5D, BH6 and BH7) instrumented with deep groundwater monitoring wells, for environmental/geotechnical/hydrogeological purposes were installed with 3 m long screens. The screens of the shallowing

monitoring wells were intercepting the native overburden material where the shallow water table aquifer is expected and the screens of the deep monitoring wells were intercepting the shale bedrock, where deep water table aquifer is expected. Groundwater levels were measured on July 12, July 14 and July 15, 2021. The groundwater levels and corresponding elevations are summarized in Table 6, and presented in the borehole logs provided in Appendix C.

Taking into consideration of the local topography and surface water features in the surrounding area, the regional groundwater flow direction is inferred to be southerly to southeasterly towards the Lake Ontario. Based on the groundwater contour maps delineated for the Site, the shallow groundwater is anticipated to flow in a westerly direction, while the deep groundwater is anticipated to flow in an easterly to southeasterly direction. A shallow groundwater contour map is presented in Figure 6A and a deep groundwater contour map is presented in Figure 6B.

However, EXP notes that the direction of localized groundwater flow may be influenced by disturbed soil (fill), underground utilities and/or underground building structures in the area. As such, the measured groundwater flow direction may not be representative of the regional area.

6.2.1 Groundwater: Horizontal Hydraulic Gradients

The horizontal hydraulic gradient, between each monitoring well pair, is calculated using the following equation:

$i = \Delta h/\Delta s$

Where,

i = horizontal hydraulic gradient;

Δh (m) = groundwater elevation difference; and,

Δs (m) = separation distance.

The shallow horizontal hydraulic gradient on-Site ranged from 0.009 m/m (between MW3S and MW5s) and 0.034 m/m (between MW2 and MW3S) in shallow aquifer. Calculations of the horizontal hydraulic gradients observed at the Site are provided in Table 7A.

The deep horizontal hydraulic gradient on-Site ranged from 0.006 m/m (between MW3D and MW7) and 0.088 m/m (between MW6 and MW7) in deep aquifer. Calculations of the horizontal hydraulic gradients observed at the Site are provided in Table 7B.

6.3 Soil Texture

Based on the 75 micron sieve of representative soil, the soil texture at the Site was determined to be medium to fine textured soils (refer to the 75 micron sieve analysis in the Certificates of Analysis - Appendix E)

6.4 Soil: Field Screening

TOV readings from each sample interval were measured for soil sample selected for PAHs analysis from all boreholes within the APECs where PAHs were identified as COCs. Vapour concentrations readings collected during subsurface drilling were measured using the RKI Eagle 2 in ppm calibrated with isobutylene and hexane or equivalent. The vapour readings, in ppm, are provided on the borehole logs in Appendix C.

Soil samples submitted for chemical analysis were selected on the basis of visual inspection of the recovered cores, TOV readings, sample location and/or depth interval. Both hexane and isobutylene readings indicate that there are insignificant volatile particles in the soil vapours.

6.5 Soil Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes. The selection of representative "worst case" soil samples was based on field screening, visual and/or olfactory evidence of impacts, and the presence of potential water bearing zones. Copies of the laboratory Certificates of Analysis for the analyzed soil samples are provided in Appendix E. A summary of the analytical results for the soil samples, including the locations and depths of each sample, a comparison of concentrations against applicable SCS, and the identification of the potential contaminants of concern, are provided in Appendix D.

6.5.1 Polycyclic Aromatic Hydrocarbons

Five (5) soil samples and one (1) field duplicate were analyzed for Polycyclic Aromatic Hydrocarbons (PAHs). PAHs were either not detected or detected below the applicable Table 2 SCS. The laboratory RDLs were below the Table 2 SCS. The results of the analysis together with the applicable Table 2 SCS are presented in Appendix D.

6.5.2 Metals (including As, Sb and Se), Cr(VI), B-HWS, Hg

Five (5) soil samples and one (1) field duplicate were submitted for metals (including As, Sb, Se), Cr(VI), B-HWS and Hg analysis. All results were either not detected or detected below the applicable Table 2 SCS. The laboratory RDLs were below the Table 2 SCS. The results of the analysis together with the applicable Table 2 SCS are presented in Appendix D.

6.5.3 Soil pH

The Table 2 SCS criteria are applicable if soil pH is in the range of 5 to 9 for surface soil (less than 1.5 m below soil surface) and 5 to 11 for subsurface soil (greater than 1.5 m below soil surface). The reported pH value for surface soil were between 7.74 and 7.76. The reported pH value for subsurface soil were between 7.6 and 7.89.

Refer to Appendix D for a summary of the soil samples analyzed for pH.

6.5.4 Cyanide

One (1) soil sample was submitted for cyanide analysis. The result was not detected and below the applicable Table 2 SCS. The laboratory RDL was below the Table 2 SCS. The result of the analysis together with the applicable Table 2 SCS are presented in Appendix D.

6.5.5 EC and SAR

Five (5) soil samples were submitted for EC and SAR analysis. The results were either not detected or detected below the applicable Table 2 SCS with the exception of the following SAR exceedance:

- One soil sample (BH8 SS1/SS2, obtained from 0.04 to 1.37 mbgs) exhibited elevated level of SAR.

The laboratory RDLs were below the Table 2 SCS. The results of the analysis together with the applicable Table 2 SCS are presented in Appendix D.

It is also noted that elevated level of SAR, present in tested location (BH8), is related to the application of salting and de-icing substances at the driveway for the purpose of snow and ice removal during the winter months. As per Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants - Exceptions), and Part IX, Subsection 49.1

of Ontario Regulation 153/04, the concentration of SAR is deemed not to be exceedances of the MECP Table 2 SCS. As such, it is the QP_{ESA}'s opinion that the applicable Table 2 SCS for SAR in soil at the site was exceeded solely because salt was used at the driveway for the purpose of keeping the area safe for traffic under conditions of snow or ice or both, and therefore these parameters are not considered COCs.

6.5.6 Chemical Transformation and Soil Contaminant Source

There were no concentrations of the chemical constituents in soil present on the property that are above the applicable SCS, therefore, chemical and biological transformations are not expected.

6.5.7 Evidence of Non-Aqueous Phase Liquid

Inspection of the soil cores retrieved from the boreholes did not indicate the presence of non-aqueous phase liquid (NAPL), staining, or sheen at the time of the Phase Two ESA.

6.6 Groundwater Quality

In accordance with the scope of work, chemical analyses were performed on groundwater samples recovered from the monitoring wells. The selection of groundwater samples was based on location and/or screen depth. Copies of the laboratory Certificates of Analysis for the analyzed groundwater samples are provided in Appendix E. A summary of the analytical results for the groundwater samples, including the locations of each sample, well screen interval depth, a comparison of parameter concentrations against applicable SCS, and the identification of the PCOCs, are provided in Appendix D.

6.6.1 Petroleum Hydrocarbons with BTEX

One (1) groundwater sample was analyzed for Petroleum Hydrocarbons (PHCs). PHCs were either not detected or detected below the applicable Table 2 SCS. The laboratory RDLs were below the Table 2 SCS.

The results of the analysis together with the applicable Table 2 SCS are presented in Appendix D.

6.6.2 Volatile Organic Compounds

Two (2) groundwater samples, one (1) field duplicate and one (1) trip blank for QA/QC purposes, were analyzed for Volatile Organic Compounds (VOCs). VOCs were either not detected or detected below the applicable Table 2 SCS. The laboratory RDLs were below the Table 2 SCS.

The results of the analysis together with the applicable Table 2 SCS are presented in Appendix D.

6.6.3 Metals (including As, Sb, Se), Sodium, Cr(VI) and Hg

Two (2) groundwater samples and one (1) field duplicate were analyzed for metals (including As, Sb, Se), Sodium, Cr(VI) and Hg. The results were either not detected or detected below the applicable Table 2 SCS with the exception of the following sodium exceedances:

- One groundwater sample (MW1, screened from 9.14 to 12.19 mbgs and its duplicate MW11) exhibited elevated level of sodium; and,
- One groundwater sample (MW5D, screened from 12.42 to 15.47 mbgs) exhibited elevated level of sodium.

It is also noted that elevated sodium in the groundwater samples from MW1 and MW5D is related to the application of salting and de-icing substances at the driveway or adjacent roadways for the purpose of snow and ice removal during the winter months. As per Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants - Exceptions), and Part IX, Subsection 49.1 of Ontario Regulation 153/04, the concentration of SAR is deemed not to be

exceedances of the MECP Table 2 SCS. As such, it is the QP_{ESA}'s opinion that the applicable Table 2 SCS for sodium in groundwater at the site was exceeded solely because salt was used at the driveway for the purpose of keeping the area safe for traffic under conditions of snow or ice or both, and therefore these parameters are not considered COCs.

The laboratory RDLs were below the Table 2 SCS. The results of the analysis together with the applicable Table 2 SCS are presented in Appendix D.

6.6.4 Chlorophenols

Two (2) groundwater samples were analyzed for Chlorophenols (CPs). The results were either not detected or detected below the applicable Table 2 SCS. The laboratory RDLs were below the Table 2 SCS.

The results of the analysis together with the applicable Table 2 SCS are presented in Appendix D.

6.6.5 Chemical Transformation and Groundwater Contaminant Source

There were no concentrations of the chemical constituents in groundwater present on the property that are above the applicable SCS, therefore, chemical and biological transformations are not expected.

6.6.6 Evidence of Non-Aqueous Phase Liquid (NAPL)

Inspection of the purged groundwater retrieved from the monitoring wells did not indicate the presence of NAPL, staining, sheen, or odour.

6.7 Sediment Quality

As no surface water body was located on-Site, the Phase Two ESA did not include sediment sampling.

6.8 Quality Assurance and Quality Control Measures

Quality assurance and quality control measures were taken during the field activities to meet the objectives of the sampling and quality assurance plan to collect unbiased and representative samples to characterize existing conditions in the overburden and bedrock materials, and water table units at the Site.

Review of field activity documentation indicated that recommended sample volumes were collected from soil and groundwater for each analytical test group into appropriate containers and preserved with proper chemical reagents in accordance with the protocols set out in the "Protocol for Analytical Methods used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act" (MECP, 2004). Samples were preserved at the required temperatures in pre-chilled insulated coolers and met applicable holding time requirements, when relinquished to the receiving laboratory.

Field QA/QC samples were collected during soil sampling. A total of two (2) soil duplicates, two (2) groundwater duplicates, and one (1) trip blank was collected to evaluate sampling precision. Refer to Table 3 and Table 5 for a summary of the QA/QC samples collected and submitted for chemical analysis.

The field duplicate sample results were quantitatively evaluated by calculating the relative percent difference (RPD). The RPD values for all parameters analyzed in soil ranged from 0% to 30%, with the exception of several metals (barium, cobalt, copper, nickel, thallium and zinc) and Boron-hot water soluble between sample BH9 SS1/SS2 and duplicate BH99 SS1/SS2. The RPD exceedance can likely be attributed to soil heterogeneity. The metals (barium, cobalt, copper, nickel, thallium and zinc) were within the O. Reg. 153/04 Table 2 Standards for both the original sample (BH9 SS1/SS2) and field duplicate (BH99 SS1/SS2). As a result, the Phase Two conclusions were not affected by this issue; the overall objectives of the investigation were met. The RPD values for all parameters analyzed in groundwater ranged from 0% to 30%, with the exception of acetone between sample

MW1 and duplicate MW11. The RPD exceedance may have been a result of sediment in the groundwater samples. Acetone was within the O. Reg. 153/04 Table 2 Standards for both the original sample (MW1) and field duplicate (MW11). As a result, the Phase Two conclusions were not affected by this issue; the overall objectives of the investigation were met.

Assessment of the duplicate soil and groundwater sample showed that the results generally met analytical test group specific acceptance criteria. The overall assessment indicates that the soil and groundwater samples were collected with an acceptable level of precision, and the data is acceptable quality for meeting the objectives of the Phase Two ESA.

The contractual laboratory selected to perform the chemical analyses was BV Labs, of Mississauga, ON. BV Labs is an accredited laboratory under the Standards Council of Canada/Canadian Association of Laboratory Accreditation (Accredited Laboratory No. 97 and No. A3200, respectively) in accordance with ISO/IEC 17025:2005 – "General Requirements for the Competence of Testing and Calibration Laboratories". Certificates of Analysis were received from BV Labs reporting the results of all the chemical analyses performed on the submitted soil and groundwater samples. Copies of the Certificates of Analysis are provided in Appendix E. Review of the Certificates of Analysis, prepared by BV Labs, indicates that they were in compliance with the requirements set out under subsection 47(3) of O. Reg. 153/04.

The analytical program conducted by BV Labs included analytical test group specific QA/QC measures to evaluate the accuracy and precision of the analytical results and the efficiency of analyte recovery during solute extraction procedures. The laboratory QA/QC program consisted of the preparation and analysis of laboratory duplicate samples to assess precision and sample homogeneity, method blanks to assess analytical bias, spiked blanks and QC standards to evaluate analyte recovery, matrix spikes to evaluate matrix interferences and surrogate compound recoveries (VOCs only) to evaluate extraction efficiency. The laboratory QA/QC results are presented in the Quality Assurance Report provided in the Certificate of Analysis prepared by BV Labs. The QA/QC results are reported as percent recoveries for matrix spikes, spike blanks and QC standards, relative percent difference for laboratory duplicates and analyte concentrations for method blanks. The QA/QC results were assessed against test group control limits in the case of spiked blanks, matrix spikes and surrogate recoveries and alert criteria in the case of method blanks and laboratory duplicates. Review of the laboratory QA/QC results reported by BV Labs indicated that they were within acceptable control limits or below applicable alert criteria for the sampled media and analytical test groups. Based on the assessment of the QA/QC, the analytical results reported are of acceptable quality and data qualifications are not required.

6.9 Phase Two Conceptual Site Model

This section presents a Phase Two Conceptual Site Model (CSM) providing a narrative, graphical and tabulated description integrating information related to the Site geologic and hydrogeologic conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of potential contaminants of concern, contaminant fate and transport, and potential exposure pathways.

Based on the current land use (parkland, residential and commercial) and proposed development (mixed residential and commercial) of the Site, Record of Site Condition (RSC) is required in support of proposed development. Please notes that the park lot (Part of 91 Park Street East) will not be changed to more sensitive land use (mixed residential and commercial). Therefore, RSC is not required for the park lot (Part of 91 Park Street East).

Two (2) CSMs have been completed in support of filing RSC. The Phase Two CSMs were completed for entire Site and RSC parcel (entire site excluding part lot) in accordance with O. Reg.153/04 as defined by the MECP and are presented in Appendix F and G, respectively. The CSM for RSC parcel will be used for filing RSC.

7. Conclusions

The results and findings of the Phase Two ESA conducted at the Site are summarized as follows:

1. Between June 28, 2021 and July 8, 2021, twelve (12) exterior boreholes (BH1, BH2, BH3D, BH3S, BH4, BH5D, BH5S, BH6, BH7, BH8, BH9 and BH10), in conjunction with geotechnical and hydrogeological investigations, were advanced by Davis Drilling Ltd. to a maximum depth of 15.9 m metres below ground surface (m bgs) under the supervision of EXP.
2. Eight (8) groundwater monitoring wells (MW1, MW2, MW3D, MW3S, MW5D, MW5S, MW6 and MW7) were installed at six (6) locations. Of all the monitoring wells, MW 1, MW3D and MW5D/MW5S were sampled between July 15 and July 16, 2021, as part of this Phase Two investigation. The remaining monitoring wells were part of the geotechnical and hydrogeological investigations, however, they were utilized to determine the groundwater flow directions for this Phase Two ESA.
3. The general stratigraphy at the Site, as observed in the boreholes, consisted of asphalt/topsoil at the surface generally overlying layers of fill/reworked native, followed by sandy silt and clayey silt till. Bedrock was encountered at depths ranging from 7.44 mbgs and 9.14 mbgs.
4. Groundwater levels were measured on July 15, 2021. Based on the groundwater contour maps for the Site, the shallow groundwater is anticipated to flow in a westerly direction, while the deep groundwater is anticipated to flow in an easterly to southeasterly direction. However, EXP notes that the direction of localized groundwater flow may be influenced by disturbed soil (fill), underground utilities and/or underground building structures in the area. As such, the measured groundwater flow direction may not be representative of the regional area.
5. Soil samples were submitted for the analysis of polycyclic aromatic hydrocarbons (PAH), Metals and/or Inorganics, pH and grain size.
6. The analytical results of the tested parameters in the soil samples were either not detected or detected below the Table 2 SCS. The laboratory RDLs were below the Table 2 SCS.
7. Groundwater samples were submitted for the analysis of Petroleum Hydrocarbons (PHCs) and volatile organic compounds (VOCs), metals and/or inorganics and Chlorophenols (CPs).
8. The analytical results of the tested parameters in the groundwater samples were either not detected or detected below the Table 2 SCS. The laboratory RDLs were below the Table 2 SCS.
9. No evidence of free product (i.e. visible film or sheen), or odour was observed during soil sampling, groundwater purging, or groundwater sampling activities.

It should be noted that monitoring well MW5S remained dry during the groundwater sampling events on July 15 and July 16, 2021. As such, groundwater samples could not be obtained from this monitoring well. The nested deep monitoring well (MW5D) installed as part of the geotechnical and hydrogeological investigations was utilized for this investigation, as an alternative groundwater sampling location.

Based on the findings of the Phase Two ESA, no further environmental investigation is required.

8. General Limitations

The information presented in this report is based on a limited investigation designed to provide information to support an assessment of the current environmental conditions within the subject property. The conclusions and recommendations presented in this report reflect Site conditions existing at the time of the investigation.

More specific information with respect to the conditions between samples, or the lateral and vertical extent of materials may become apparent during excavation operations. The interpretation of the borehole information must, therefore, be validated during any such excavation operations. Consequently, during the future development of the property, conditions not observed during this investigation may become apparent. Should this occur, EXP Services Inc. should be contacted to assess the situation, and the need for additional testing and reporting. EXP has qualified personnel to provide assistance in regards to any future geotechnical and environmental issues related to this property.

The environmental investigation was carried out to address the intent of applicable provincial Regulations, Guidelines, Policies, Standards, Protocols and Objectives administered by the Ministry of the Environment and Climate Change. It should also be noted that current environmental Regulations, Guidelines, Policies, Standards, Protocols and Objectives are subject to change, and such changes, when put into effect, could alter the conclusions and recommendations noted throughout this report. Achieving the study objectives stated in this report has required us to arrive at conclusions based upon the best information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the engineering profession. It is intended that the outcome of this investigation assist in reducing the client's risk associated with environmental impairment. Our work should not be considered 'risk mitigation'. No other warranty or representation, either expressed or implied, is included or intended in this report.

This report was prepared for the exclusive use of 10 WEST GO GP Inc. and may not be reproduced in whole or in part, without the prior written consent of EXP, or used or relied upon in whole or in part by other parties for any purposes whatsoever. Any use which a third party makes of this report, or any part thereof, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

9 Closure

We trust this report is satisfactory for your purposes. Should you have any questions, please do not hesitate to contact this office.

Yours truly,

EXP Services Inc.

Janet Szeto
Project Scientist
Environmental Services

Samuel Lee, P.Eng.
Senior Project Manager
Environmental Services

10 References

This study was conducted in general accordance with the applicable Regulations, Guidelines, Policies, Standards, Protocols and Objectives administered by the Ministry of the Environment. Specific reference is made to the following:

- Canadian Standards Association. November 2001. Z768-0 Phase I Environmental Site Assessment.
- Environmental Protection Act, R.S.O. 1990, Chapter E.19, as amended, September 2004.
- MECP (2011) Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. Ontario Ministry of the Environment, April 15, 2011.
- MECP (2011a) Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. Ontario Ministry of the Environment, March 2004, amended as of July 1, 2011.
- Ministry of the Environment [MECP] (1996) Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario. Ontario Ministry of the Environment, December 1996.
- Occupational Health and Safety Act - Ministry of Labour (MOL).
- Ontario Regulation 153/04, made under the Environmental Protection Act, May 2004, amended.
- Ontario Water Resources Act – R.R.O. 1990, Regulation 903, amended.
- “Phase One Environmental Assessment– 84 & 90 High Street East, 17 & 19 Ann Street and Park Lot, Mississauga Ontario”, dated January 12, 2021, prepared for 10 West GO GP Inc., by EXP Services Inc.
- Quaternary Geology of Ontario - geology_ll.shp [computer file], Ontario: Ontario Geological Survey, 2000.
- Quaternary Geology of Ontario - geology_ll.shp [computer file], Ontario: Ontario Geological Survey, 2000.
- Toporama; Natural Resources Canada. Map 30M05. Scale 1:15,000. 2008.

Figures – Entire Site

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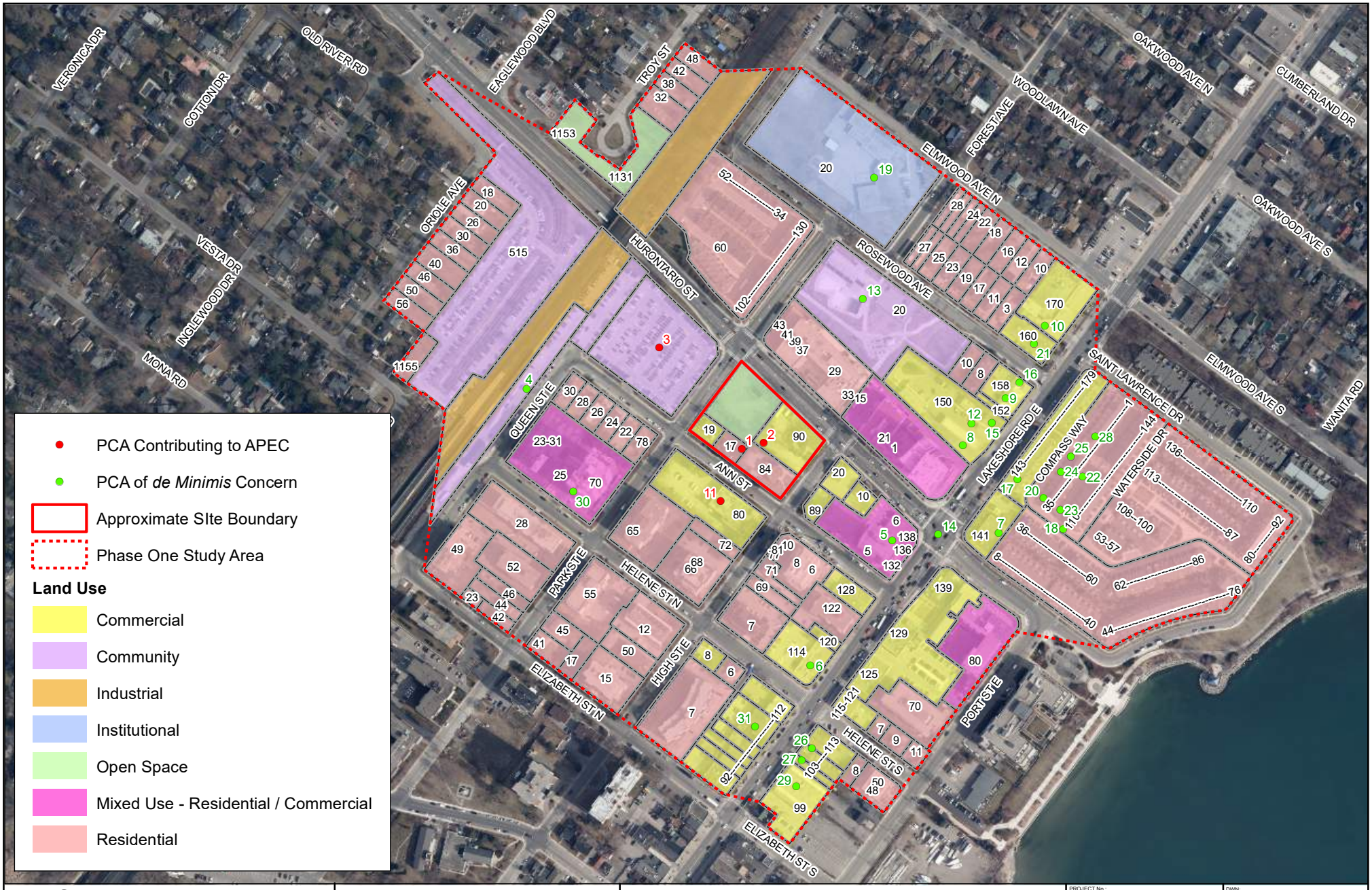
N

0 150 300 450 600 750 m

TITLE AND LOCATION:

SITE LOCATION PLAN
Phase Two Environmental Site Assessment
84, 90 High Street East and 17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	1



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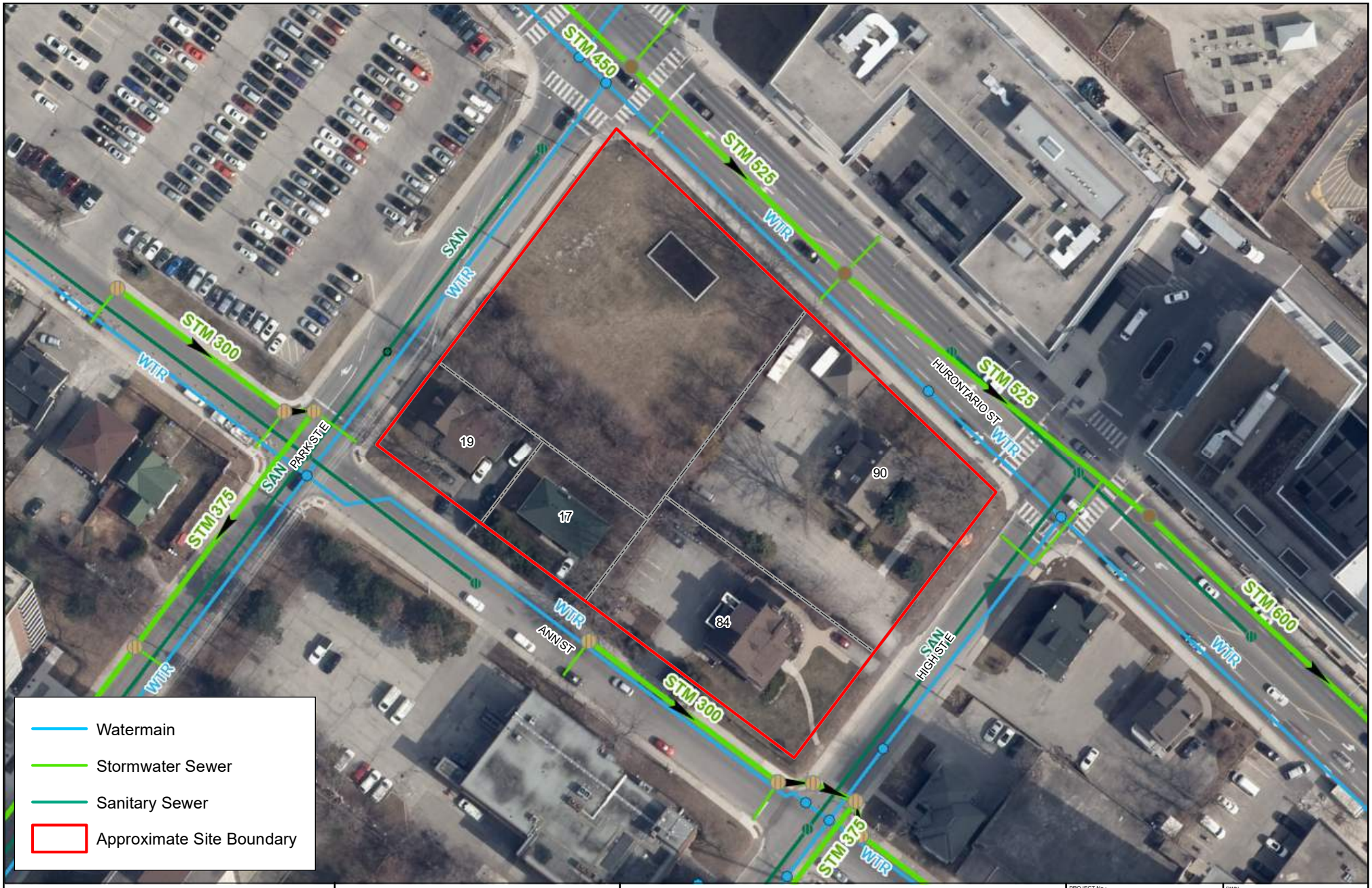
TITLE AND LOCATION:

PHASE ONE STUDY AREA AND LAND USE PLAN,
AND POTENTIALLY CONTAMINATING ACTIVITIES (PCAs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-D0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 2



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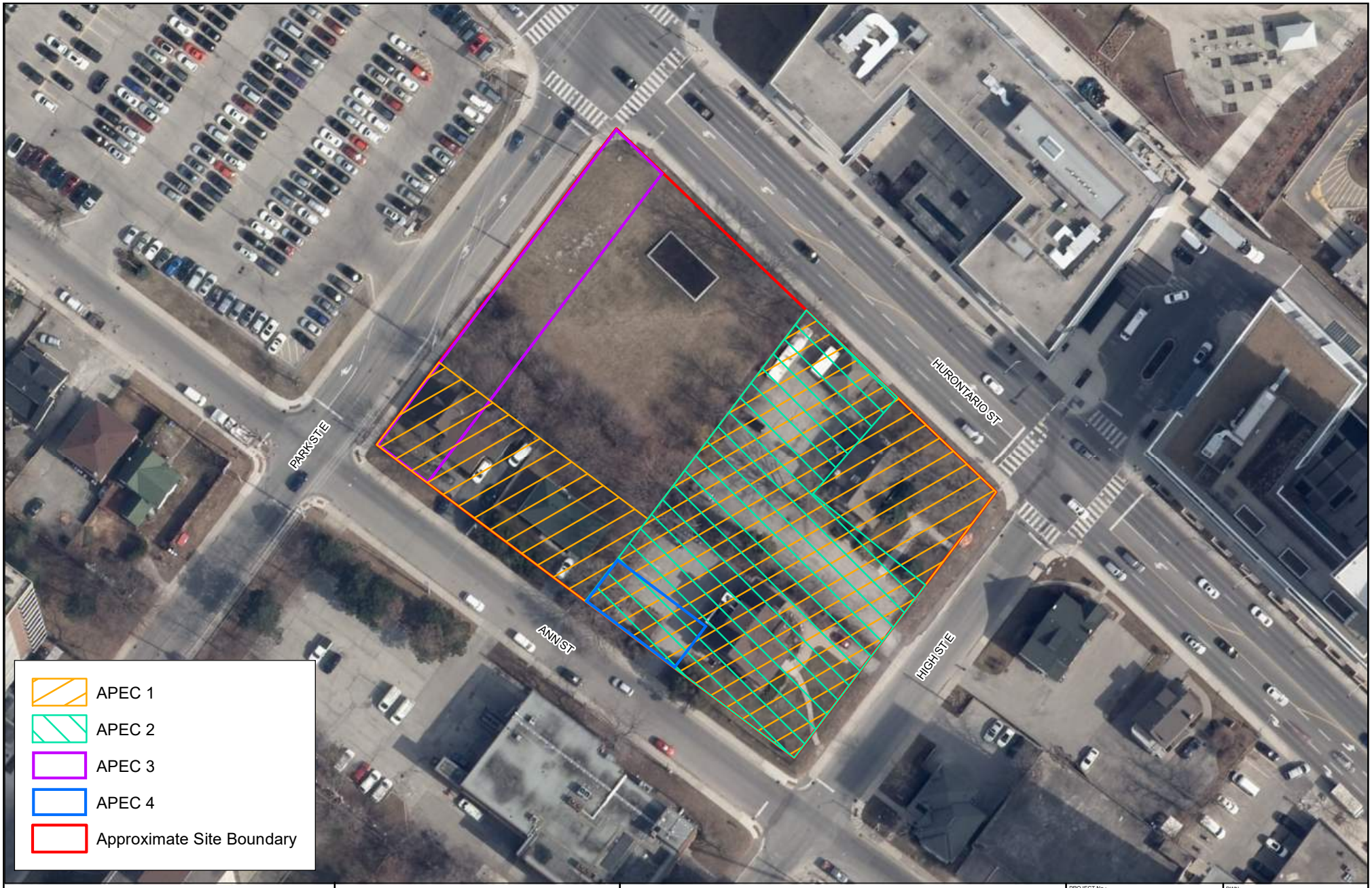
N

0 10 20 30 40 50 m

TITLE AND LOCATION:

SITE PLAN AND UTILITIES
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: KL
DATE: AUGUST 2021	FIG. No.: 3



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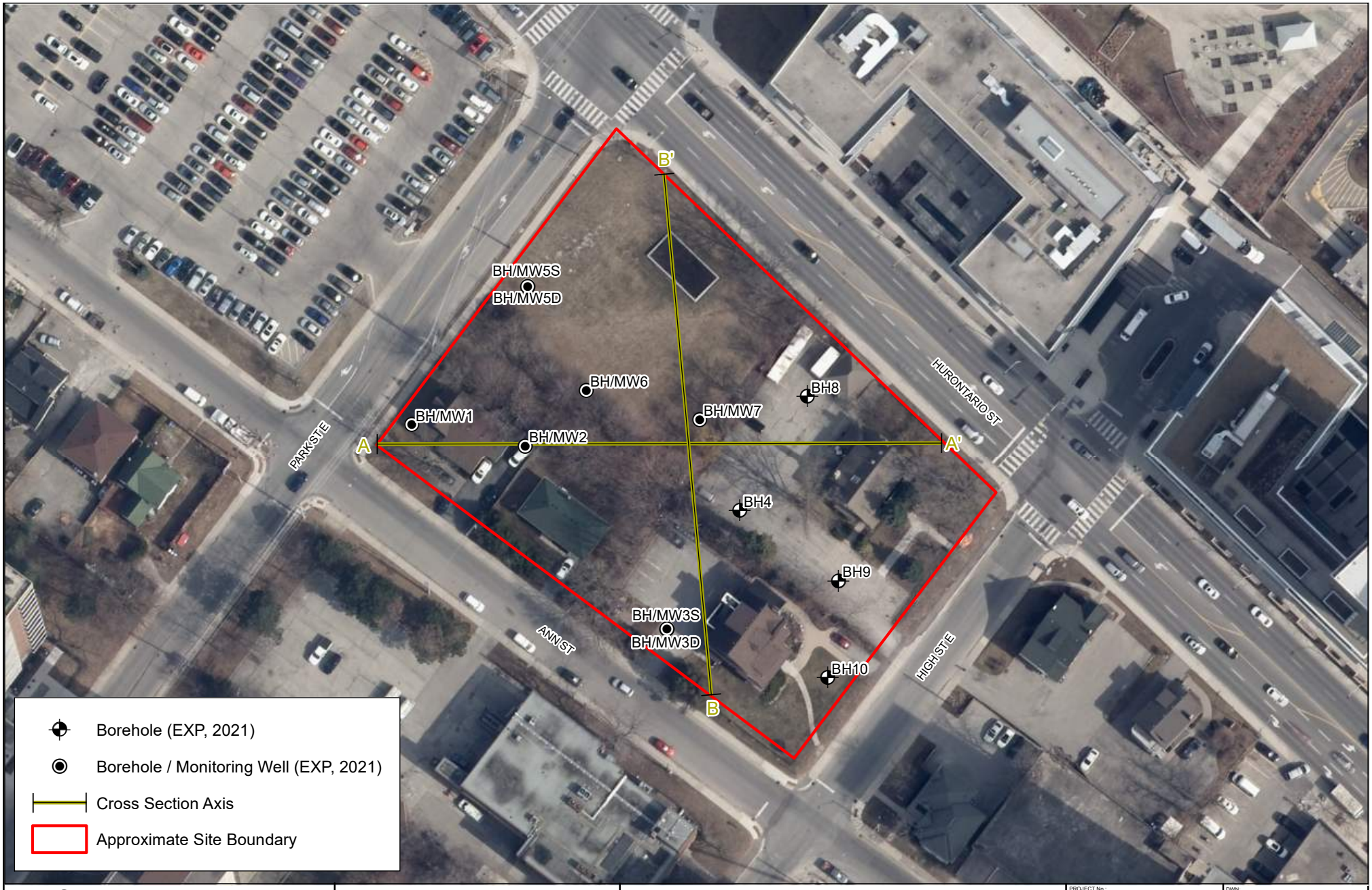
0 10 20 30 40 50 m

TITLE AND LOCATION:

AREAS OF POTENTIAL
ENVIRONMENTAL CONCERN (APECs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 4



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0 10 20 30 40 50 m

TITLE AND LOCATION:

BOREHOLE /MONITORING WELL
LOCATION PLAN
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 5A

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N

0 10 20 30 40 50 m

TITLE AND LOCATION:

BOREHOLE /MONITORING WELL
LOCATION PLAN AND APECs
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 5B

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0 10 20 30 40 50 m

TITLE AND LOCATION:

SHALLOW GROUNDWATER CONTOUR PLAN
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 6A

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0 10 20 30 40 50 m

TITLE AND LOCATION:

DEEP GROUNDWATER CONTOUR PLAN
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 6B

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TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS -
POLYCYCLIC AROMATIC HYDROCARBON (PAHs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 7

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N

0 10 20 30 40 50 m

TITLE AND LOCATION:
SOIL ANALYTICAL RESULTS -
METALS INCLUDING Cr(VI), B-HWS, Hg, As, Sb, Se
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	8

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N

0 10 20 30 40 50 m

TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS -
FREE CYANIDE (CN-)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 9

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TITLE AND LOCATION:
SOIL ANALYTICAL RESULTS -
ELECTRICAL CONDUCTIVITY (EC) AND
SODIUM ADSORPTION RATIO (SAR)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 10

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TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS - pH
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	11

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TITLE AND LOCATION:
GROUNDWATER ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS (PHCs) INCLUDING BTEX
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 12

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0 10 20 30 40 50 m

TITLE AND LOCATION:

GROUNDWATER ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS (VOCs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
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PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 13

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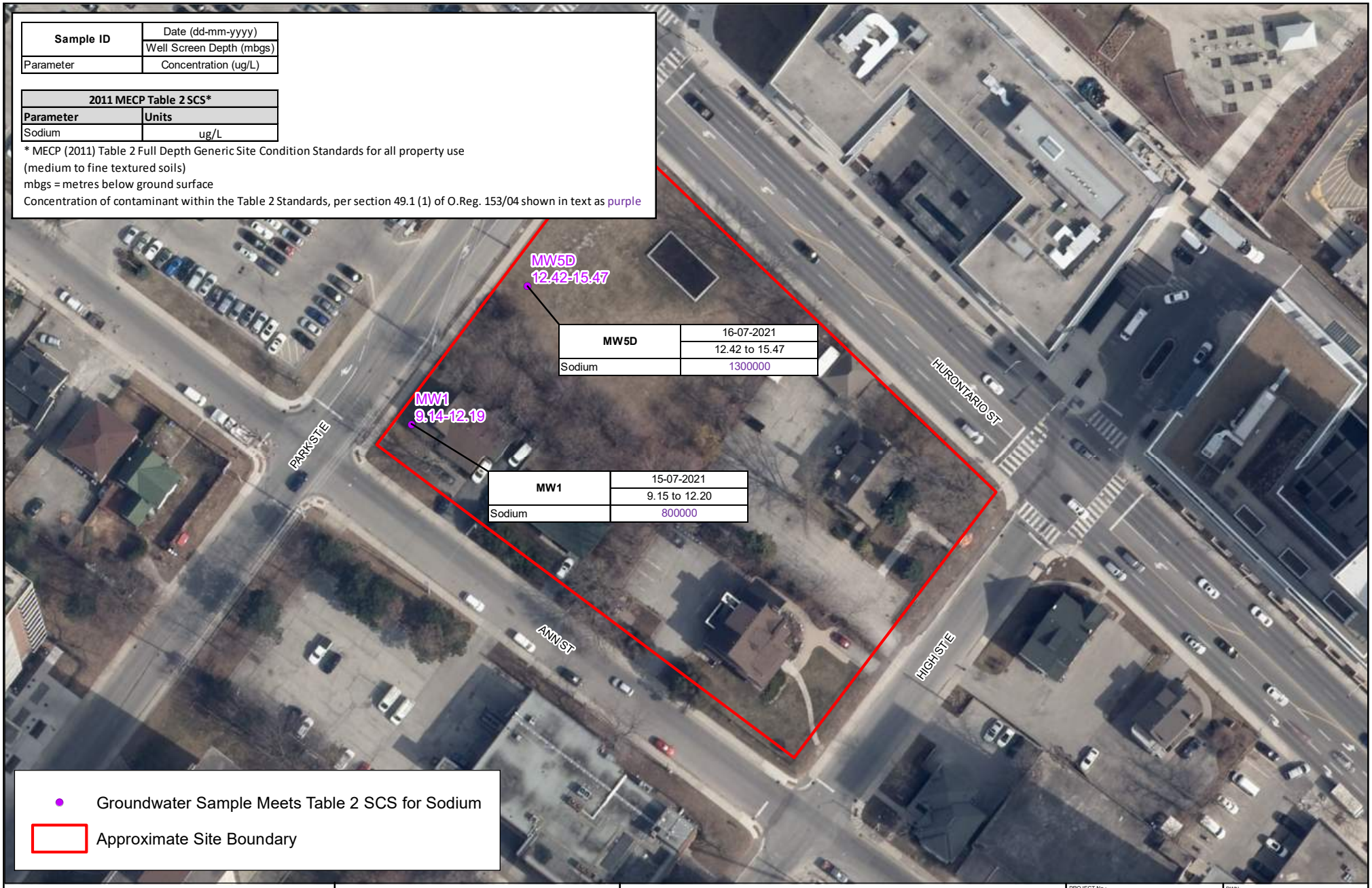
0 10 20 30 40 50 m

TITLE AND LOCATION:

GROUNDWATER ANALYTICAL RESULTS -
METALS (INCLUDING HYDRIDE-FORMING METALS)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	14



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TITLE AND LOCATION:

GROUNDWATER ANALYTICAL RESULTS - SODIUM
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	15

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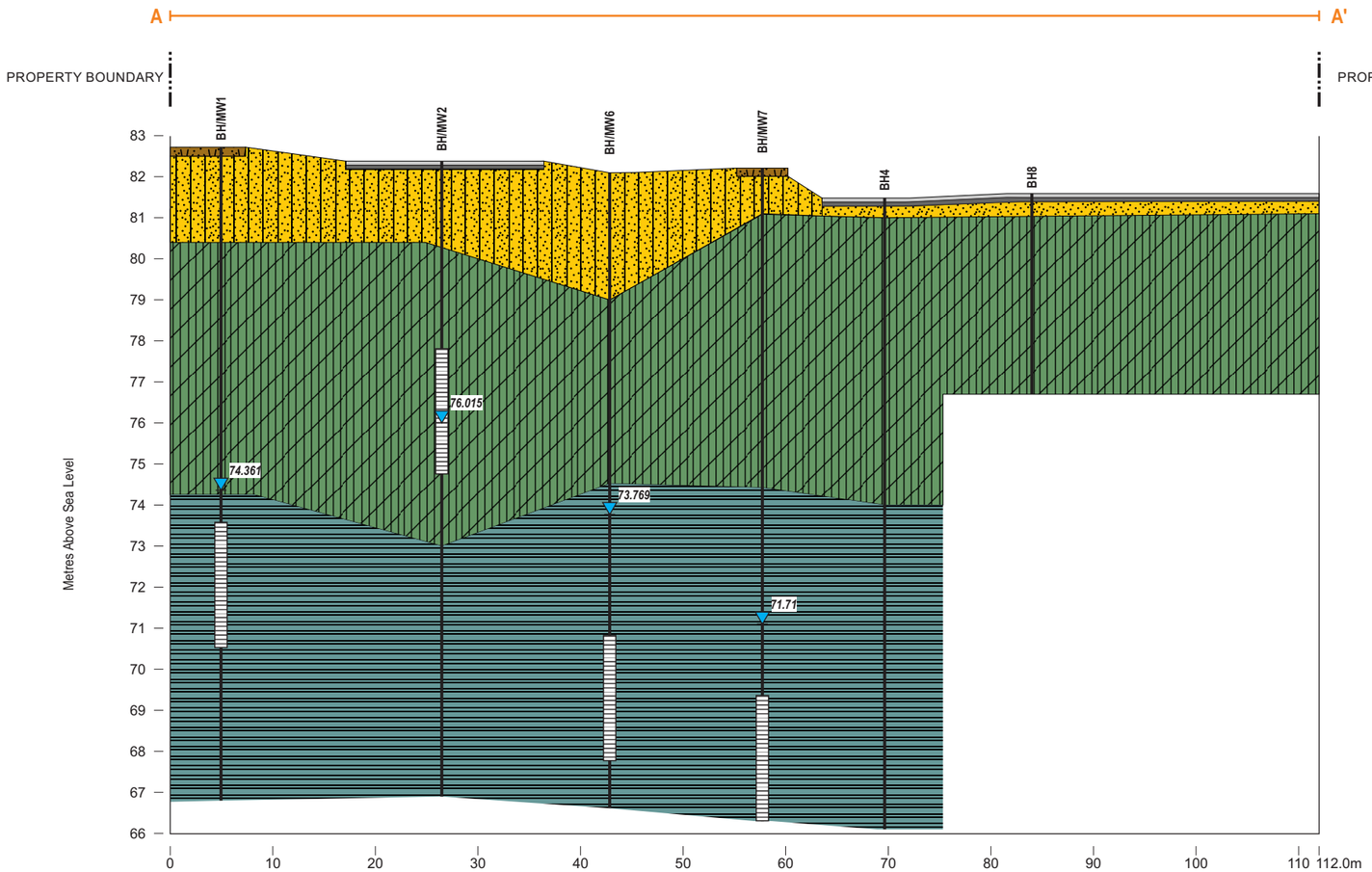
TITLE AND LOCATION:

GROUNDWATER ANALYTICAL RESULTS - CHLOROPHENOLS (CPs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	16



SCALE:

4 X VERTICAL EXAGGERATION

SOURCE:

BASED ON FIELD OBSERVATIONS BY EXP

DRAWN BY	CHECKED BY
K.G.	S.L.

LEGEND:

- TEST HOLE
- SCREEN INTERVAL
- GROUND WATER ELEVATION (masl JULY 15 2021)
- masl — METRES ABOVE SEA LEVEL

- TOPSOIL
- ASPHALT
- GRANULAR BASE
- SAND TO SANDY SILT TO CLAYEY SILT FILL
- SANDY SILT (REWORKED NATIVE)
- CLAYEY SILT TILL
- SHALE BEDROCK

CROSS SECTION A-A'

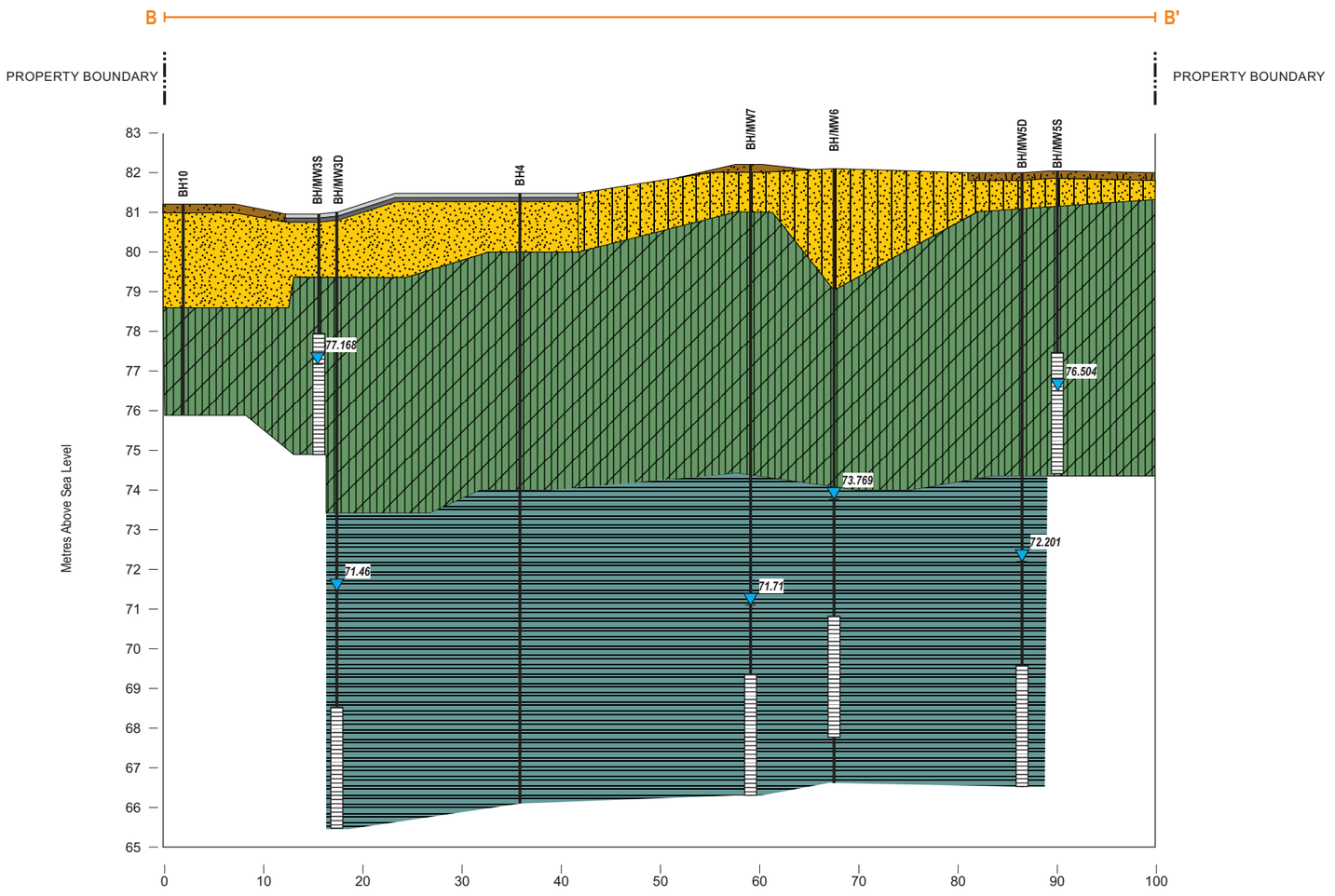
FIGURE 17

84, 90 HIGH STREET EAST
AND 17, 19 ANN STREET,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: BRM-00239423-E0

DATE: AUGUST2021

239423-PH2 XSEC A-AUG21



SCALE:

4 X VERTICAL EXAGGERATION

SOURCE:

BASED ON FIELD OBSERVATIONS BY EXP

DRAWN BY	CHECKED BY
K.G.	S.L.

LEGEND:

- TEST HOLE
- SCREEN INTERVAL
- GROUND WATER ELEVATION (masl JULY 15 2021)
- masl — METRES ABOVE SEA LEVEL

- TOPSOIL
- ASPHALT
- GRANULAR BASE
- SAND TO SANDY SILT TO CLAYEY SILT FILL
- SANDY SILT (REWORKED NATIVE)
- CLAYEY SILT TILL
- SHALE BEDROCK

CROSS SECTION B-B'

FIGURE 18

84, 90 HIGH STREET EAST
AND 17, 19 ANN STREET,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: BRM-00239423-E0

DATE: AUGUST2021

239423-PH2 XSEC B-AUG21

Figures – RSC Parcel

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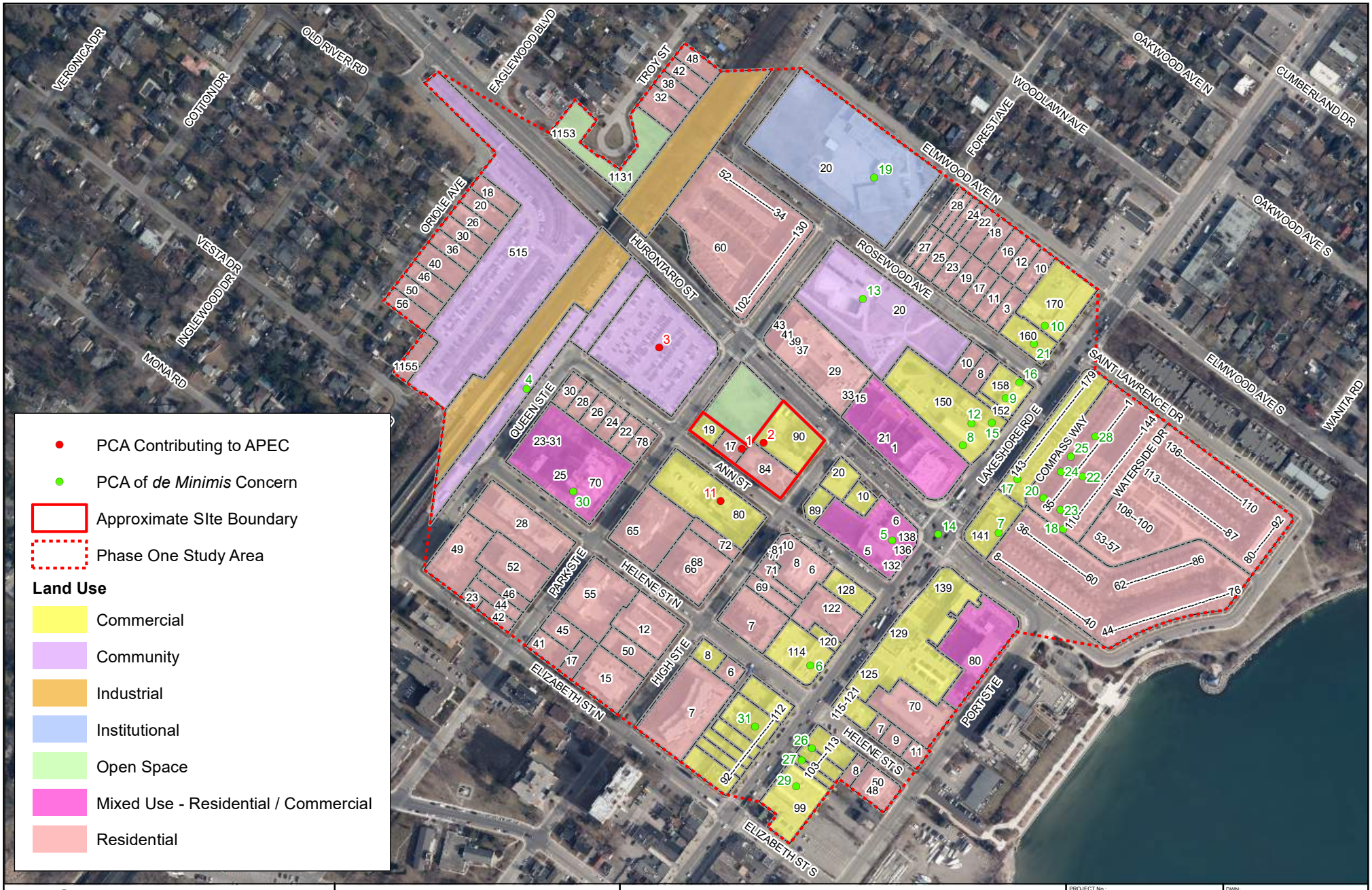
N

0 150 300 450 600 750 m

TITLE AND LOCATION:

SITE LOCATION PLAN
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 1



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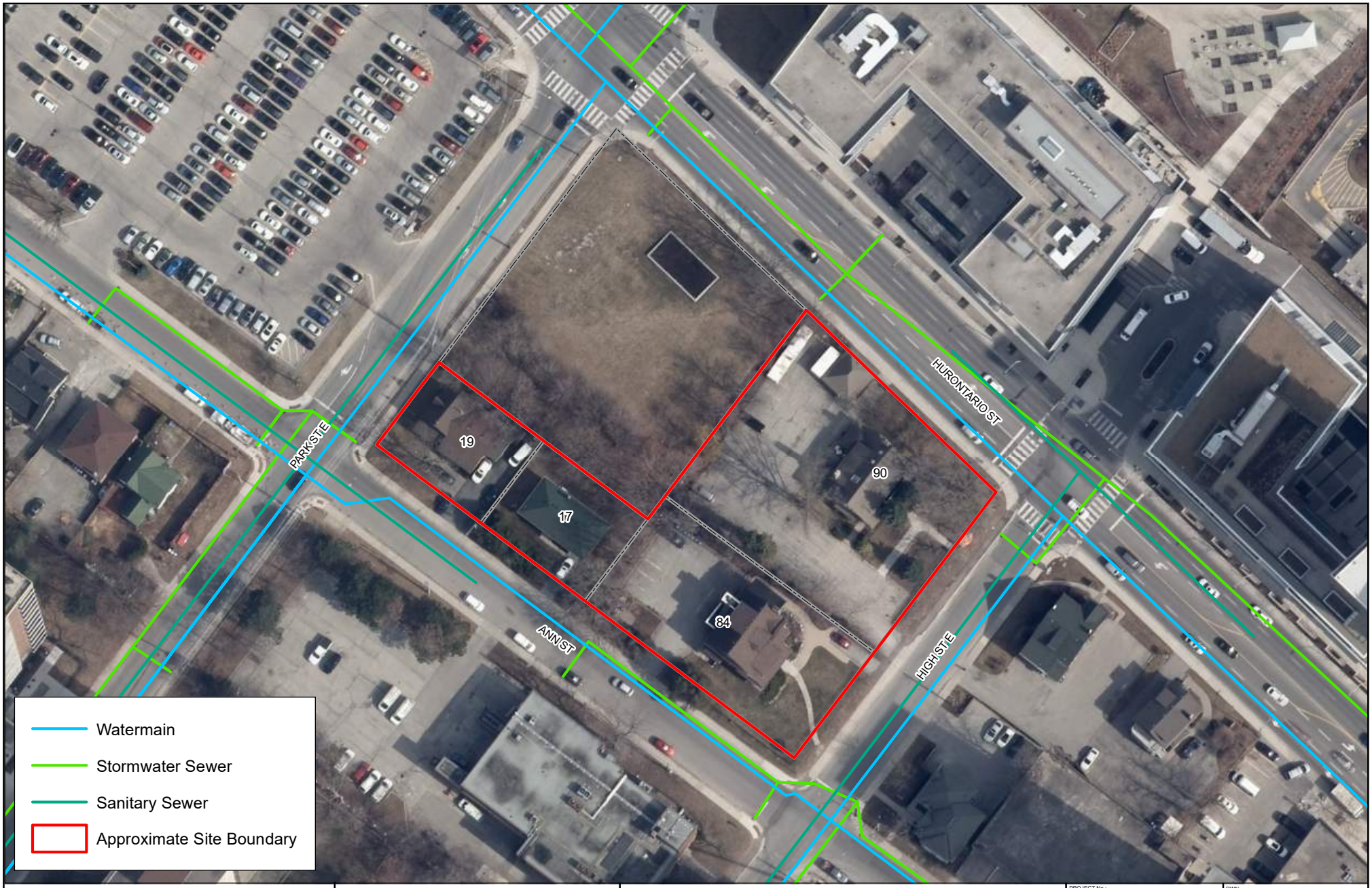
TITLE AND LOCATION:

PHASE ONE STUDY AREA AND LAND USE PLAN,
AND POTENTIALLY CONTAMINATING ACTIVITIES (PCAs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-D0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	2



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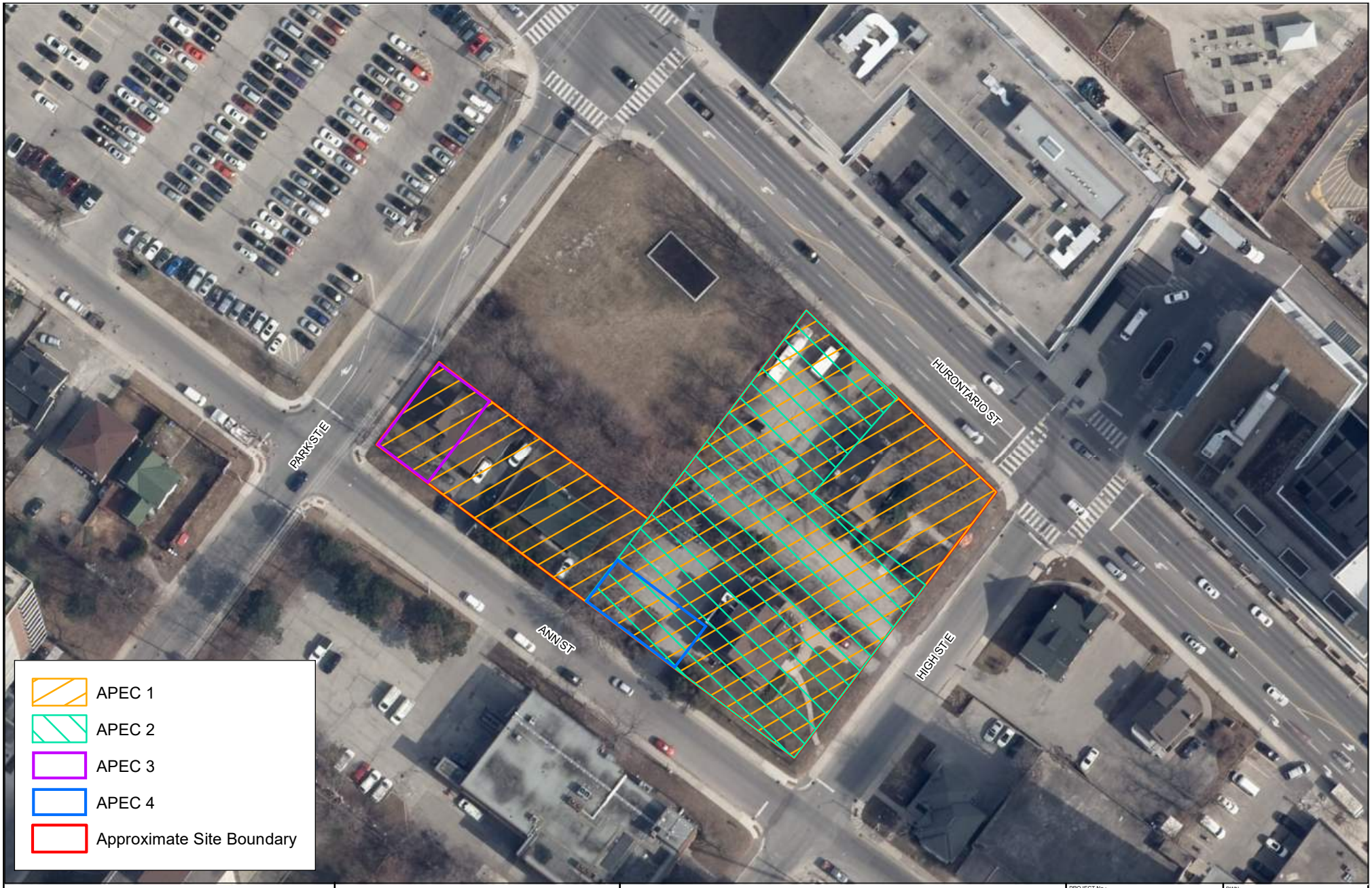
0 10 20 30 40 50 m

TITLE AND LOCATION:

SITE PLAN AND UTILITIES
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	3



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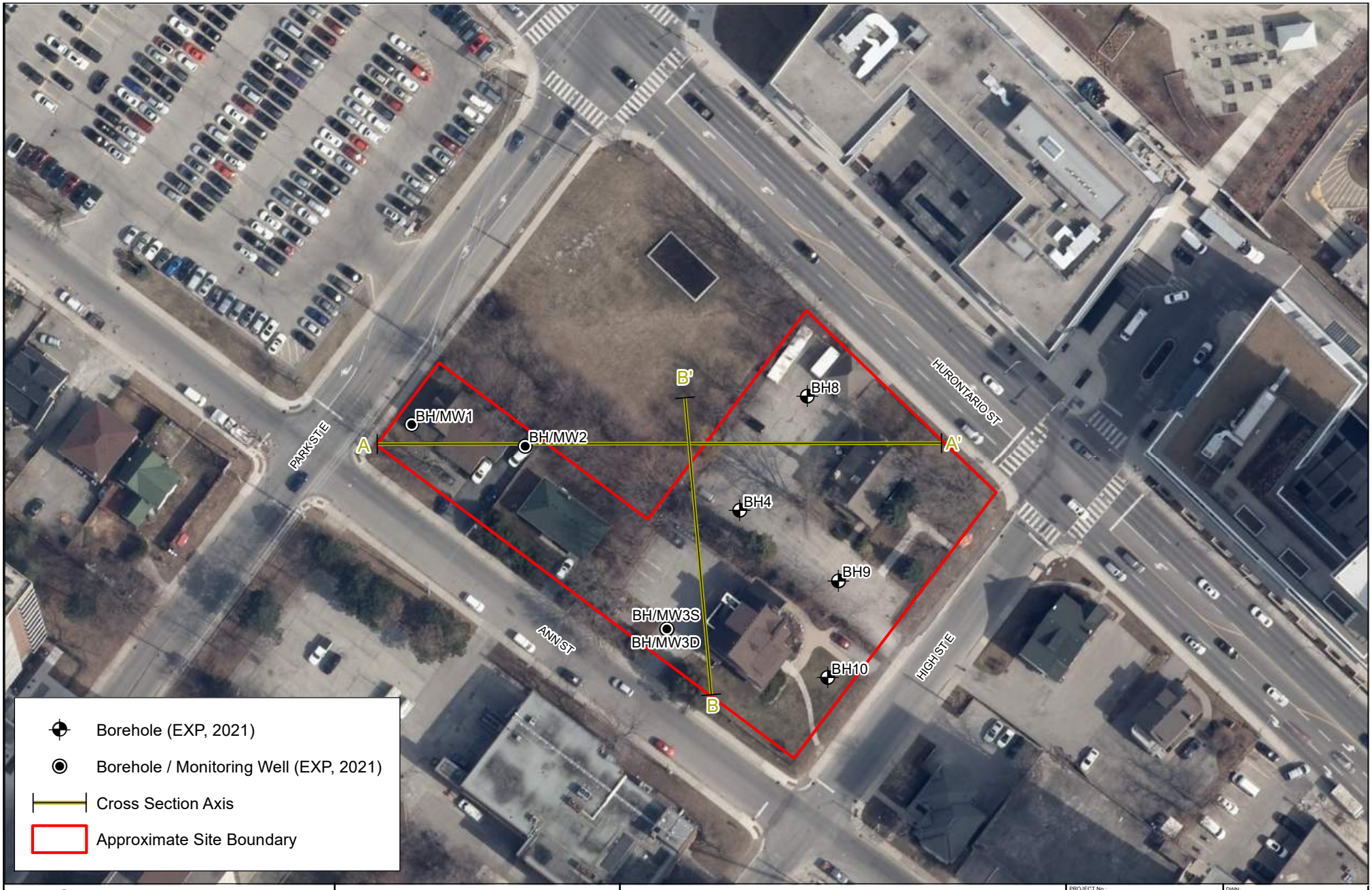
TITLE AND LOCATION:

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APECs)

Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 4



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0 10 20 30 40 50 m

TITLE AND LOCATION:
BOREHOLE /MONITORING WELL
LOCATION PLAN
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 5A

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TITLE AND LOCATION:
BOREHOLE /MONITORING WELL
LOCATION PLAN AND APECs
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 5B

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TITLE AND LOCATION:

GROUNDWATER CONTOUR PLAN
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 6

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N

0 10 20 30 40 50 m

TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS -
POLYCYCLIC AROMATIC HYDROCARBON (PAHs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 7

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TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS -
METALS INCLUDING Cr(VI), B-HWS, Hg, As, Sb, Se
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 8

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N

0 10 20 30 40 50 m

TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS -
FREE CYANIDE (CN-)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 9

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N

0 10 20 30 40 50 m

TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS -
ELECTRICAL CONDUCTIVITY (EC) AND
SODIUM ADSORPTION RATIO (SAR)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 10

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N

0 10 20 30 40 50 m

TITLE AND LOCATION:

SOIL ANALYTICAL RESULTS - pH
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 11

Note: * indicates groundwater sample was only analyzed for BTEX

Groundwater Sample Meets Table 2 SCS for PHCs

Approximate Site Boundary

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N

0 10 20 30 40 50 m

TITLE AND LOCATION:
GROUNDWATER ANALYTICAL RESULTS - PETROLEUM HYDROCARBONS (PHCs) INCLUDING BTEX
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	12

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0 10 20 30 40 50 m

TITLE AND LOCATION:

GROUNDWATER ANALYTICAL RESULTS -
VOLATILE ORGANIC COMPOUNDS (VOCs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.: BRM-00239423-E0	DWN: AC
SCALE: AS NOTED	CHKD: SL
DATE: AUGUST 2021	FIG. No.: 13

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0 10 20 30 40 50 m

TITLE AND LOCATION:

GROUNDWATER ANALYTICAL RESULTS -
METALS (INCLUDING HYDRIDE-FORMING METALS)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

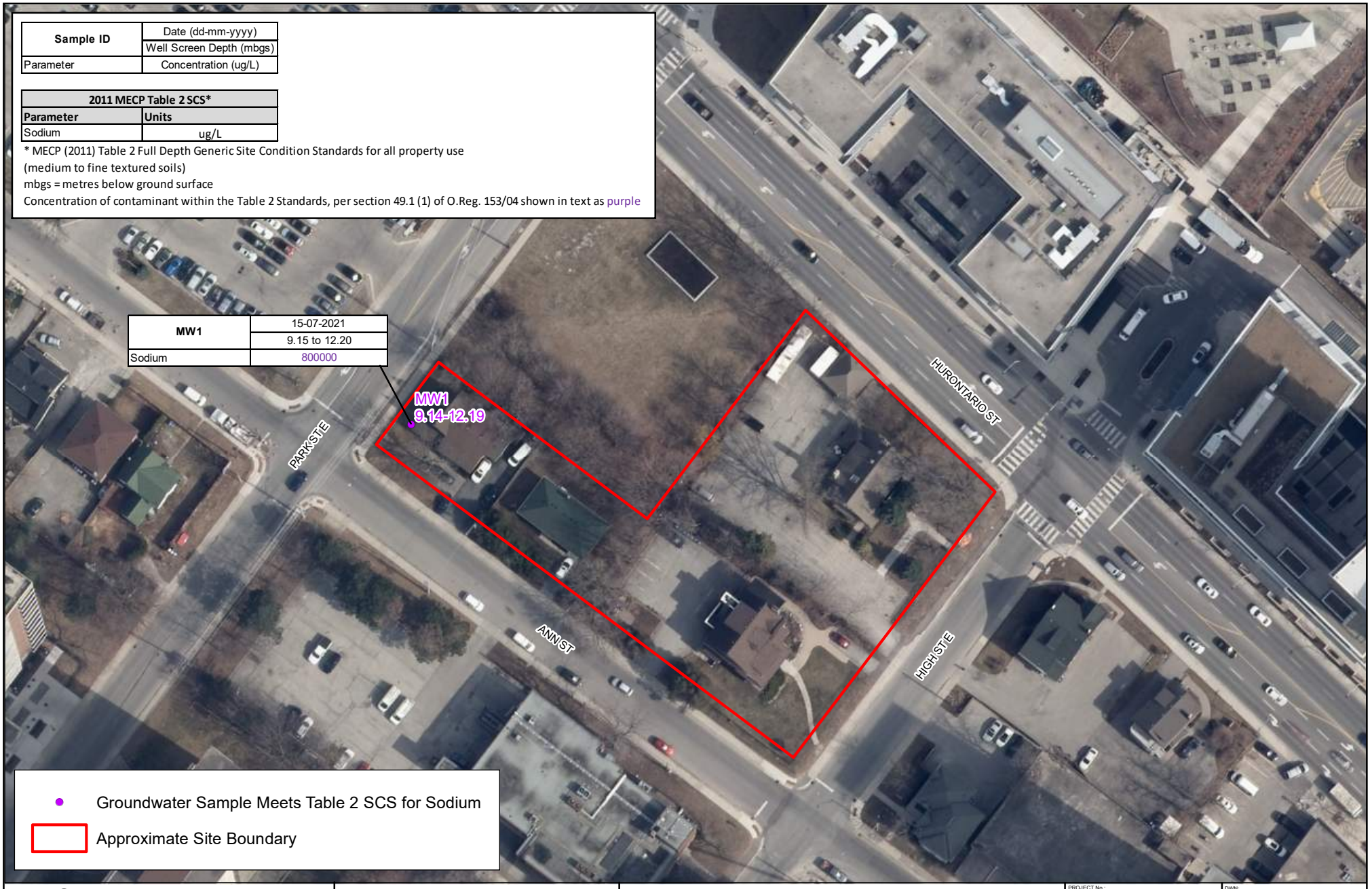
PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	14

Sample ID	Date (dd-mm-yyyy)
	Well Screen Depth (mbgs)
Parameter	Concentration (ug/L)

2011 MECP Table 2 SCS*	
Parameter	**Units**
Sodium	ug/L

* MECP (2011) Table 2 Full Depth Generic Site Condition Standards for all property use
(medium to fine textured soils)
mbgs = metres below ground surface
Concentration of contaminant within the Table 2 Standards, per section 49.1 (1) of O.Reg. 153/04 shown in text as purple

MW1	15-07-2021
	9.15 to 12.20
Sodium	800000



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N

0 10 20 30 40 50 m

TITLE AND LOCATION:

GROUNDWATER ANALYTICAL RESULTS - SODIUM
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	15

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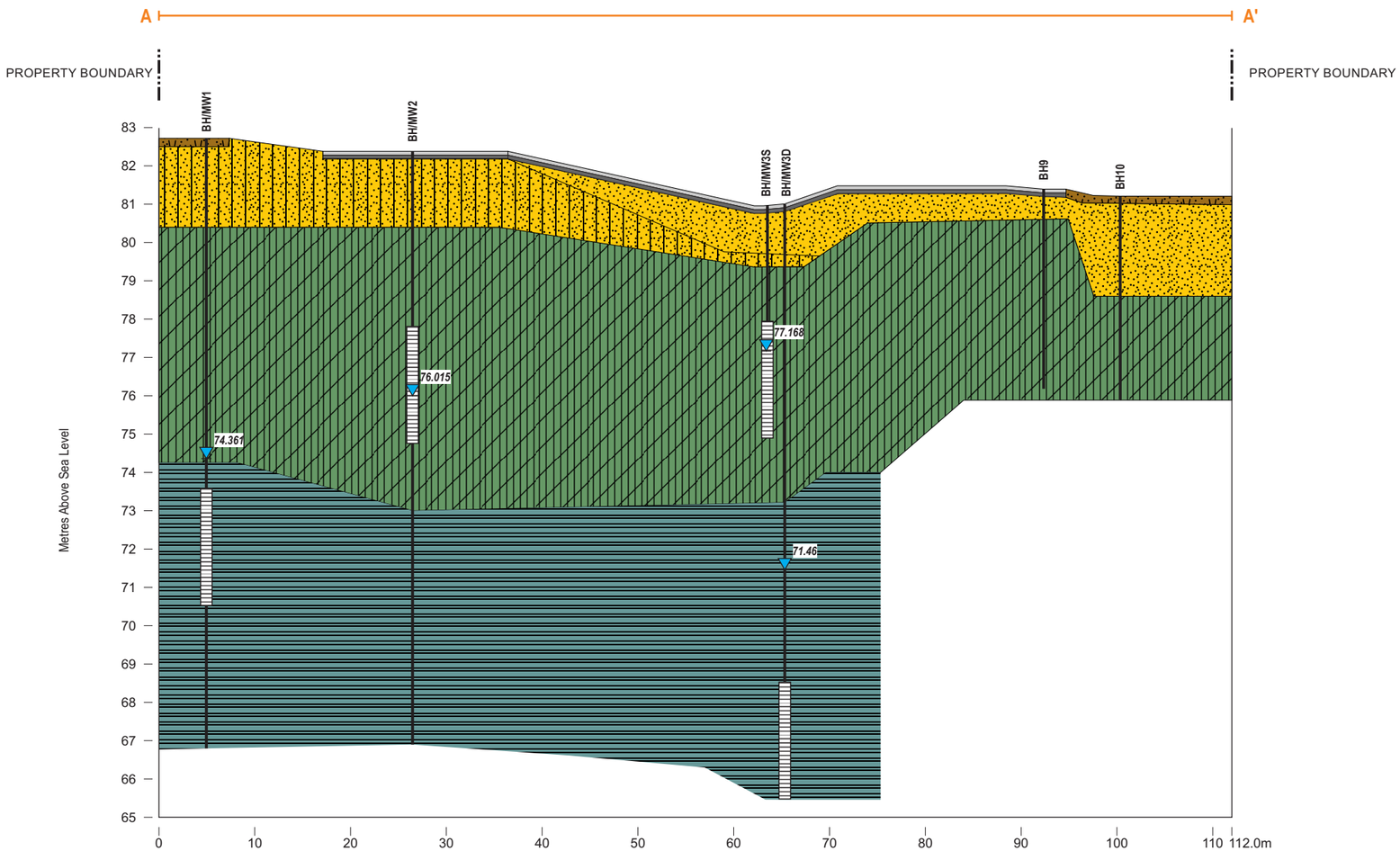
N

0 10 20 30 40 50 m

TITLE AND LOCATION:

GROUNDWATER ANALYTICAL RESULTS - CHLOROPHENOLS (CPs)
Phase Two Environmental Site Assessment
84, 90 High Street East and
17, 19 Ann Street
Mississauga, Ontario

PROJECT No.:	DWN:
BRM-00239423-E0	AC
SCALE:	CHKD:
AS NOTED	SL
DATE:	FIG. No.:
AUGUST 2021	16



SCALE:

4 X VERTICAL EXAGGERATION

SOURCE:

BASED ON FIELD OBSERVATIONS BY EXP

DRAWN BY	CHECKED BY
K.G.	S.L.

LEGEND:

- TEST HOLE
- SCREEN INTERVAL
- GROUND WATER ELEVATION (masl JULY 15 2021)
- masl — METRES ABOVE SEA LEVEL
- TOPSOIL
- ASPHALT
- GRANULAR BASE
- SAND TO SANDY SILT TO CLAYEY SILT FILL
- SANDY SILT (REWORKED NATIVE)
- CLAYEY SILT TILL
- SHALE BEDROCK

CROSS SECTION A-A'

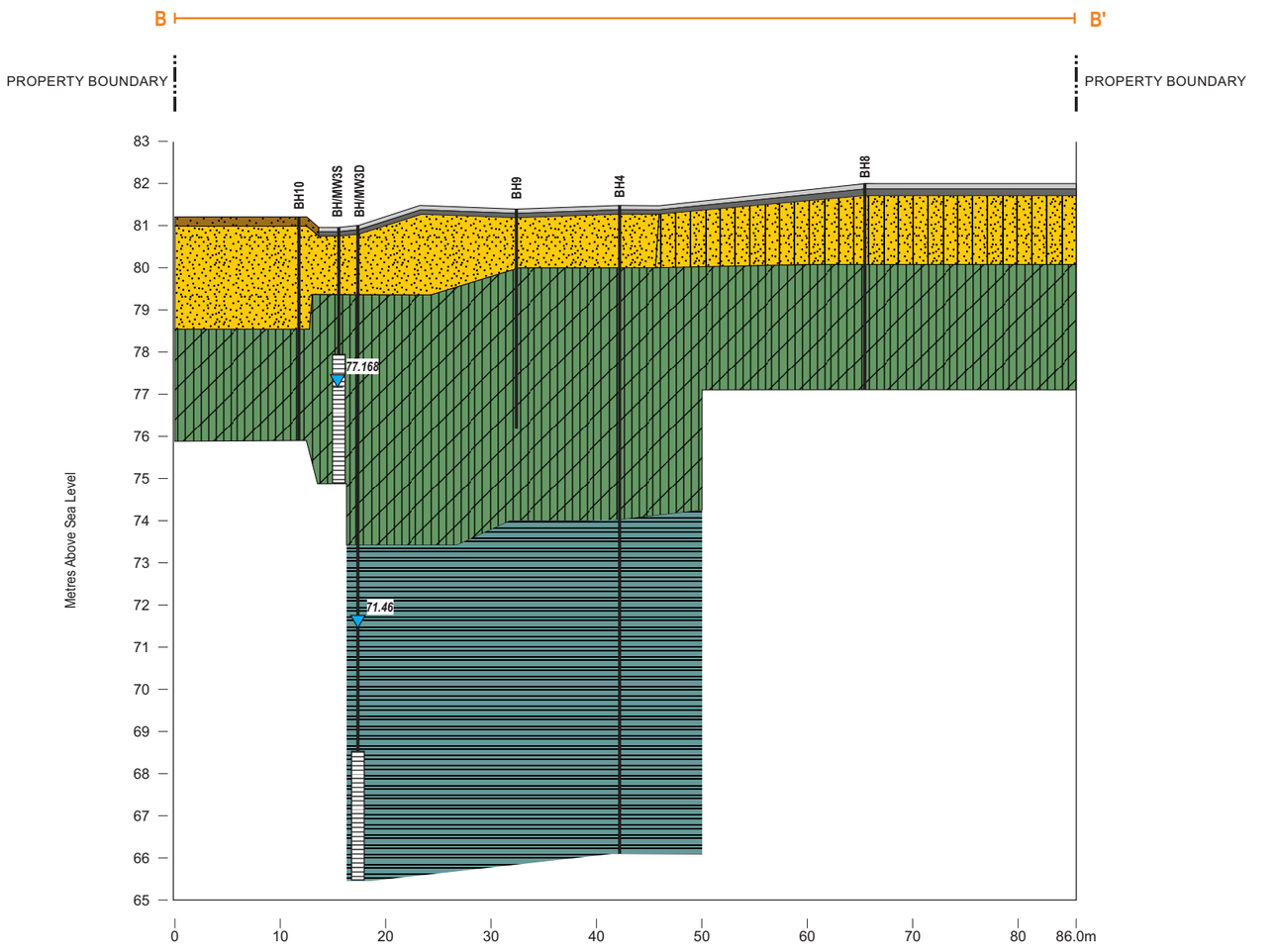
FIGURE 17

84, 90 HIGH STREET EAST
AND 17, 19 ANN STREET,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: BRM-00239423-E0

DATE: AUGUST2021

239423-RSC XSEC A-AUG21



SCALE:

4 X VERTICAL EXAGGERATION

SOURCE:

BASED ON FIELD OBSERVATIONS BY EXP

DRAWN BY	CHECKED BY
K.G.	S.L.

LEGEND:

- TEST HOLE
- SCREEN INTERVAL
- GROUND WATER ELEVATION (masl JULY 15 2021)
- masl — METRES ABOVE SEA LEVEL

- TOPSOIL
- ASPHALT
- GRANULAR BASE
- SAND TO SANDY SILT TO CLAYEY SILT FILL
- SANDY SILT (REWORKED NATIVE)
- CLAYEY SILT TILL
- SHALE BEDROCK

CROSS SECTION B-B'

FIGURE 18

84, 90 HIGH STREET EAST
AND 17, 19 ANN STREET,
MISSISSAUGA, ONTARIO

PROJECT NUMBER: BRM-00239423-E0

DATE: AUGUST2021

239423-RSC XSEC B-AUG21

Tables

TABLE 1 - Areas of Potential Environmental Concern (APECs)

BRM-00239423-E0- Phase Two Environmental Site Assessment

84, 90 High Street East, 17, 19 Ann Street and Park Lot, Mississauga, Ontario

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)(1)	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: Fill of Unknown Quality	Southern and Western Portions of the Site	**PCA1:** # 30 Importation of Fill Material of Unknown Quality	On-Site	PAHs and Metals, B-HWS, Hg, Cr (VI), As, Sb, Se	Soil
APEC 2: Application of De-icing and Salting Substances in the Drivways	Southern Portion of the Site	**PCA2:** # Other – Use of De-icing and Salting Substances	On-site	Soil: EC and SAR	Soil
APEC 3: Lumber yard located to the immediate north of the site, including chemical extraction (88 Park Street East)	Northern Portion of the Site	**PCA 3:** #59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Off-Site (adjacent north)	Metals, chlorophenols (CPs), Volatile Organic Compounds (VOCs)	Groundwater
APEC 4: AST at neighbouring property (80 High Street East)	Western Portion of the Site	**PCA 11:** #28 – Gasoline and Associated Products Storage in Fixed Tanks	Off-Site (adjacent west)	Petroleum Hydrocarbons (PHCs) and BTEX	Groundwater

1. Area of Potential Environmental Concern means the area on, in or under a phase one study area where one or more contaminants are potentially present, as determined through the P One ESA, including through,
(a) identification of post or present uses on, in or under the phase one property, and
(b) identification of potentially contaminating activities.

2. Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area

3. When completing this column, identify all contaminants of potential concern using the Method Groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011, as specified below:

ABNs	PCBs	PCBs	Metals	Electrical Conductivity	SAR
CPs	PAHs	PAHs	As, Sb, Se	Cr (VI)	
1,4- Dioxane	THMs	THMs	Na	Hg	
Dioxins/Furans, PCDDs/PCI	VOCs	VOCs	B-HWS	Methyl Mercury	
Ocs	BTEX	BTEX	Cl-	high pH	
PHCs	Ca, Mg	Ca, Mg	CN-	low pH	

4. When submitting a record of site condition for filing, a copy of this table must be attached

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TABLE 2 - Borehole Log Information

BRM-00239423-E0- Phase Two Environmental Site Assessment

84, 90 High Street East, 17, 19 Ann Street and Park Lot, Mississauga, Ontario

Location ID	Ground Elevation (m)	Depth of BH (m bgs)	Bottom Elevation (m bgs)	Date Drilled	Drilling Contractor
BH/MW1	82.720	15.9	66.82	8-Jul-21	Davis Drilling Ltd.
BH/MW2	82.380	15.44	66.94	28-Jun-21	Davis Drilling Ltd.
BH/MW3D	81.030	15.47	65.56	29-Jun-21	Davis Drilling Ltd.
BH/MW3S	80.960	6.1	74.86	29-Jun-21	Davis Drilling Ltd.
BH4	81.480	15.42	66.06	30-Jun-21	Davis Drilling Ltd.
BH/MW5D	82.380	15.47	66.91	5-Jul-21	Davis Drilling Ltd.
BH/MW5S	80.960	7.62	73.34	5-Jul-21	Davis Drilling Ltd.
BH/MW6	82.090	15.54	66.55	6-Jul-21	Davis Drilling Ltd.
BH/MW7	82.210	15.9	66.31	7-Jul-21	Davis Drilling Ltd.
BH8	81.590	4.9	76.69	30-Jun-21	Davis Drilling Ltd.
BH9	81.410	5.2	76.21	30-Jun-21	Davis Drilling Ltd.
BH10	81.210	5.2	76.01	7-Jul-21	Davis Drilling Ltd.

Elevation based on City of Mississauga Benchmark No. 732.
Elevation: 78.128m, VERTICAL DATUM: CANADIAN GEODETIC DATUM, 1928 (NOT 1978 SOUTHERN ONTARIO READJUSTMENT)

TABLE 3 - Summary of Soil Samples Submitted for Chemical Analysis

BRM-00239423-E0- Phase Two Environmental Site Assessment

84, 90 High Street East, 17, 19 Ann Street and Park Lot, Mississauga, Ontario

Soil Sample ID	Sample Depth Interval (m)	Rationale	Analysis
BH2 SS3	1.52 to 2.13	Regulatory	pH and Grain Size
BH3 SS2	0.76 to 1.37	APEC 1 and APEC 2	PAHs, Metals (including As, Sb and Se), B-HWS, CrVI, Hg, EC, SAR and pH
BH4 SS1/SS2	0.04 to 1.37	APEC 1 and APEC 2	PAHs, Metals (including As, Sb and Se), B-HWS, CrVI, Hg, EC and SAR
BH5 SS1	0 to 0.61	Regulatory	pH
BH6 SS5	3.05 to 3.66	Regulatory	pH
BH8 SS1/SS2	0.04 to 1.37	APEC 1 and APEC 2	PAHs, Metals (including As, Sb and Se), B-HWS, CrVI, Hg, EC and SAR
BH9 SS1/SS2	0.04 to 1.37	APEC 1 and APEC 2	PAHs, Metals (including As, Sb and Se), B-HWS, CrVI, Hg, EC and SAR
BH10 SS2	0.76 to 1.37	APEC 1 and APEC 2	PAHs
BH10 SS3	1.52 to 2.13	APEC 1 and APEC 2	Metals (including As, Sb and Se), B-HWS, CrVI, Hg, CN, EC, SAR and pH
QA/QC Samples:			
BH99 SS1/SS2	0.04 to 1.37	Duplicate of BH9 SS1/SS2	PAHs
BH99 SS1/SS2	0.04 to 1.37	Duplicate of BH9 SS1/SS2	Metals (including As, Sb and Se), B-HWS, CrVI and Hg

PAHs - Polayaromatic Hydrocarbons

B-HWS - Boron Hot Water Soluble; Cr(VI) - Chromium VI; Hg - Mercury; CN - Cyanide

EC - Electrical Conductivity; SAR - Sodium Adsorption Ratio

As - Arsenic; Sb - Antimony; Se - Selenium

TABLE 4 - Monitoring Well Installation Details

BRM-00239423-E0- Phase Two Environmental Site Assessment

84, 90 High Street East, 17, 19 Ann Street and Park Lot, Mississauga, Ontario

Location ID	Ground Elevation (masl)	Measured Depth of MW (m bgs)	Screen Length (m)	Top of Screen (Measured)	Bottom of Screen (Measured)	Geologic Units Intercepted by Well Screen	Well Condition
BH/MW1	82.720	12.19	3.05	73.58	70.53	Shale Bedrock	Intact
BH/MW2	82.380	7.62	3.05	77.81	74.76	Clayey Silt Till	Intact
BH/MW3D	81.030	15.51	3.05	68.57	65.52	Shale Bedrock	Intact
BH/MW3S	80.960	6.10	3.05	77.91	74.86	Clayey Silt Till	Intact
BH/MW5D	82.380	15.47	3.05	69.96	66.91	Shale Bedrock	Intact
BH/MW5S	82.330	7.62	3.05	77.76	74.71	Clayey Silt Till	Intact
BH/MW6	82.090	14.33	3.05	70.81	67.76	Shale Bedrock	Intact
BH/MW7	82.210	15.90	3.05	69.36	66.31	Shale Bedrock	Intact

Elevation based on geodetic benchmark.

TABLE 5 - Summary of Groundwater Samples Submitted for Chemical Analysis

BRM-00239423-E0- Phase Two Environmental Site Assessment

84, 90 High Street East, 17, 19 Ann Street and Park Lot, Mississauga, Ontario

GW Sample ID	Sampling Date	Rationale	Analysis
MW1	15-Jul-21	Assess groundwater quality associated with APEC 3	CPs, VOCs, Metals (including As, Sb and Se), Na, CrVI and Hg
MW3S	16-Jul-21	Assess groundwater quality associated with APEC 4	PHCs, BTEX
MW5D	16-Jul-21	Assess groundwater quality associated with APEC 3 (as limited water was recovered from MW5S)	CPs, VOCs, Metals (including As, Sb and Se), Na, CrVI and Hg
QA/QC Samples:			
MW11	15-Jul-21	Duplicate of MW1	VOCs and Metals (including As, Sb and Se), Na, CrVI and Hg
TRIP BLANK	16-Jul-21	Regulatory	VOCs

CPs - Chlorophenols
PHCs - Petroleum Hydrocarbonds
BTEX - Benzene, Toulene, Ethylbenzene, Xylene
VOCs - Volatile Organic Compounds
Cr(VI) - Chromium VI; Hg - Mercury; CN - Cyanide
Na - Sodium
As - Arsenic; Sb - Antimony; Se - Selenium

TABLE 6 - Water Level Depths and Elevations

BRM-00239423-E0- Phase Two Environmental Site Assessment

84, 90 High Street East, 17, 19 Ann Street and Park Lot, Mississauga, Ontario

Location ID	Ground Elevation (masl)	Water Level Depth (m bg)	Water Level Depth (m asl)	Date
BH/MW1	82.72	7.51	75.21	12-Jul-21
		8.39	74.33	14-Jul-21
		8.36	74.36	15-Jul-21
BH/MW2	82.38	4.76	77.62	12-Jul-21
		6.63	75.75	14-Jul-21
		6.37	76.02	15-Jul-21
BH/MW3D	81.030	9.83	71.20	12-Jul-21
		9.75	71.28	14-Jul-21
		9.57	71.46	15-Jul-21
BH/MW3S	80.960	3.79	77.17	15-Jul-21
BH/MW5D	82.380	7.96	74.42	12-Jul-21
		11.19	71.19	14-Jul-21
		10.18	72.20	15-Jul-21
BH/MW5S	82.330	5.83	76.50	15-Jul-21
BH/MW6	82.090	8.34	73.75	12-Jul-21
		8.44	73.65	14-Jul-21
		8.32	73.77	15-Jul-21
BH/MW7	82.210	8.71	73.50	12-Jul-21
		10.65	71.56	14-Jul-21
		10.50	71.71	15-Jul-21

TABLE 7A - Summary of Horizontal Hydraulic Gradients (Overburden-Shallow)

BRM-00239423-E0- Phase Two Environmental Site Assessment

84, 90 High Street East, 17, 19 Ann Street and Park Lot, Mississauga, Ontario

Well Pair	Separation Distance (m)	Groundwater Elevations (m)	Elevation Difference (m)	Hydraulic Gradient* (m/m)
MW2	33.4	76.02	-1.15	0.034
MW3S		77.17		
MW3S	73.5	77.17	0.67	0.009
MW5S		76.50		
MW2	44.4	76.02	-0.48	0.011
MW5S		76.50		

*The horizontal hydraulic gradient between monitoring well pair is calculated from i = Δh/Δs, where I is the horizontal hydraulic gradient, Δh (m) is the groundwater elevation difference and Δs (m) is the distance apart.

TABLE 7B - Summary of Horizontal Hydraulic Gradients (Overburden-Deep)

BRM-00239423-E0- Phase Two Environmental Site Assessment

84, 90 High Street East, 17, 19 Ann Street and Park Lot, Mississauga, Ontario

Well Pair	Separation Distance (m)	Groundwater Elevations (m)	Elevation Difference (m)	Hydraulic Gradient* (m/m)
MW1	64.7	74.36	2.90	0.045
MW3D		71.46		
MW1	35.5	74.36	2.16	0.061
MW5D		72.20		
MW1	35.4	74.36	0.59	0.017
MW6		73.77		
MW1	56.9	74.36	2.65	0.047
MW7		71.71		
MW3D	73.2	71.46	-0.74	0.010
MW5D		72.20		
MW3D	49.8	71.46	-2.31	0.046
MW6		73.77		
MW3D	42.0	71.46	-0.25	0.006
MW7		71.71		
MW5D	23.8	72.20	-1.57	0.066
MW6		73.77		
MW5D	43.6	72.20	0.49	0.011
MW7		71.71		
MW6	23.3	73.77	2.06	0.088
MW7		71.71		

*The horizontal hydraulic gradient between monitoring well pair is calculated from $i = \Delta h/\Delta s$, where I is the horizontal hydraulic gradient, Δh (m) is the groundwater elevation difference and Δs (m) is the distance apart.

Appendix A – Sampling Analysis Plan

Phase Two Environmental Site Assessment Sampling and Analysis Plan (SAAP)

1. Introduction

This Appendix presents the Sampling and Analysis Plan (SAAP) that was developed in support of the Phase Two Environmental Assessment Work (ESA) for the property at 84, 90 High Street East, 17, 19 Ann Street and Park Lot with no municipal address, Mississauga, Ontario (hereinafter referred to as the 'Site'). The Phase Two ESA will be conducted to provide further characterization of the Site subsurface conditions and address the Areas of Potential Environmental Concerns (APECs) outlined in EXP's January 2021 Phase One ESA to the subsequent filing of a Record of Site Condition (RSC) on the Ontario Ministry of the Environment, Conservation & Parks (MECP) Brownfields Environmental Site Registry, which might be required. The SAAP presents the procedures and measures that will be undertaken during field investigative activities to characterize the Site conditions and meet the data quality objectives of the Phase Two ESA.

The SAAP presents the sampling program proposed for the Site, the recommended procedures and protocols for sampling and related field activities, the data quality objectives, and the quality assurance/ quality control measures that will be undertaken to provide for the collection of accurate, reproducible and representative data.

2. Field Sampling Program

The field sampling program was developed to provide for the collection of samples of the surficial and subsurface soil materials for chemical analysis of metals and/or inorganics, polyaromatic hydrocarbons (PAH), and pH. The groundwater collected from the monitoring wells were analyzed for metals and/or inorganics, Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), Chlorophenols (CPs). The drilling program will be conducted concurrently with Geotechnical and Hydrogeological Investigation.

The soil sampling media is to consist of the surface soils and upper overburden materials (up to maximum depth of 15 mbgs or bedrock is encountered). The soil sampling will be location-specific to assess for the potential presence of contaminants of concern based on the identification of areas of potential environmental concern (APECs). Vapour readings will also be collected in the field to determine samples to be submitted for VOCs. The soil sample intervals will extend from the surface up to maximum depth of 15 mbgs or bedrock is encountered.

The groundwater sampling will be location-specific to assess for the potential presence of contaminants of concern on the identification of APECs. The monitoring well network will comprise of eight (8) newly installed monitoring wells.

Vertical control of the boreholes and monitoring wells will be obtained through the completion of an elevation survey with reference to a local structure with a known geodetic elevation. Groundwater flow and direction in the water table aquifer will also be determined through groundwater level measurements and the elevations established from the Site elevation survey.

3. Field Methods

To meet the requirements of the field sampling program, the following field investigative methods will be undertaken:

- Borehole Drilling;
- Soil Sampling;
- Monitoring Well Installation;
- Monitoring Well Development;
- Groundwater Level Measurements;
- Elevation Survey; and,
- Groundwater Sampling.

3.1 Borehole Drilling

Boreholes will be advanced at the Site to facilitate the collection of soil samples for chemical analysis and geologic characterization; and, for the installation of groundwater monitoring wells. The drilling program will be conducted concurrently with Geotechnical and Hydrogeological Investigation. A total of ten (10) boreholes are proposed to be advanced at the Site up to a maximum depth of approximately 15 m below grade, to provide for the collection of samples of the surficial and overburden materials beneath the Site. The borehole locations will be selected to determine the presence or absence of impacts in the soils and the upper overburden groundwater and to address the APECs outlined in EXP January 2021 Phase One ESA.

Prior to borehole drilling, utility clearances will be obtained from public and private locators, as required. If any uncertainty regarding the location of a buried utility at a borehole location is encountered, hand augering, digging, or hydrovacing will be performed beforehand to confirm the location of the utility.

Where there is overlying asphalt or concrete, the overlying material will be mechanically cored to provide access to the underlying soil materials. The borehole drilling program will be conducted by a licensed driller under the oversight of EXP field staff. Auger flights will be cleaned prior to the commencement of drilling at each borehole location.

3.2 Soil Sampling

Soil samples will be collected for chemical analysis and geologic property characterization. The soil samples will be collected using 5 cm diameter, 61 cm long, split spoons and hollow stem augers or a 5 cm diameter, 1.5 m long, duel tube sampling system with interior dedicated vinyl sampling tubes. Upon retrieval from the boreholes, the split spoons or vinyl sampling tubes will be placed on a flat surface and disassembled by drilling personnel to provide access of the recovered cores. Geologic and sampling details of the recovered cores will be logged and the samples will be assessed for the potential presence of non-aqueous phase liquids. Soil stratigraphy encountered in the boreholes will be texturally, visually and olfactory classified in the field and in the laboratory. Soil samples will be logged for colour, grain size, moisture content, density, structures, texture, staining, and field vapour readings. A Photo-ionization Detector (PID) or GastechtorTM will be utilized to screen the soil samples for Total Organic Vapour (TOV). Representative worst-case soil samples from each borehole will be collected and submitted to a certified laboratory for analysis based on TOV readings, sample depth, visual and/or olfactory field observations.

Recommended volumes of soil samples selected for chemical analysis will be collected into pre-cleaned laboratory-supplied glass sample jars/vials identified for the specified analytical test group. Samples intended for PHC/BTEX and VOCs will be collected using a laboratory-supplied soil core sampler, placed into the vials containing methanol for preservation purposes and sealed using Teflon lined septa lids. The samples will be placed into clean insulated coolers chilled with ice for storage and transport. The samples will be assigned unique identification numbers, and the date, time, location, and requested analyses for each sample will be documented in a bound field note book. The samples will be submitted to the contractual laboratory within analytical test group holding times under Chain of Custody protocols. New disposable chemical resistant gloves will be used for each soil core to prevent sample cross-contamination.

3.3 Monitoring Well Installation

Four (4) of the boreholes are to be instrumented as groundwater monitoring wells, and two (2) set of nested monitoring wells will be at two (2) of the boreholes. The six (6) monitoring wells were installed with 3 m long screens intercepting the native overburden material, where the shallow water table aquifer is expected. The monitoring wells will be constructed using 51 mm diameter, Schedule 40, PVC riser pipe and number 10 slot size (0.25 mm) well screens. The base of the well screen will be sealed with threaded flush PVC end caps. All well pipe connections will be factory machined threaded flush couplings. The annular space around the well screen will be backfilled with silica sand, to an average height of 0.6 m above the top of the screen. Granular bentonite will be placed in the borehole annulus from the top of the sand pack to approximately 0.3 m below grade. The monitoring well will be completed with flush-mounted protective steel casings cemented into place.

3.4 Monitoring Well Development

The newly installed monitoring wells will be developed to remove fine sediment particles potentially lodged in the sand pack and well screen to enhance hydraulic communication with the surrounding formation waters. The monitoring wells will be developed using a dedicated low-density polyethylene (LDPE) tubing, equipped with an inertial foot valve to disturb the water column. The wells will be developed until approximately 3 to 5 well volumes of water will be removed and/or until purged dry. Well development details will be documented on a well development log sheet or in a bound hard cover notebook. All development waters will be collected and stored in labeled, sealed containers.

3.5 Groundwater Level Measurements

Groundwater level measurement will be recorded for the newly installed monitoring well to determine the depth of the water table aquifer beneath the Site. The water level will be measured with respect to the top of the PVC riser pipe by means of an electronic water level meter. The water levels will be recorded on water level log sheets or in a bound field notebook. The water level meter probe will be decontaminated between monitoring well locations.

3.6 Elevation Survey

An elevation survey will be conducted to obtain vertical control of the newly installed monitoring well location and boreholes. The top of the PVC riser pipe of the monitoring well and ground surface elevation of the monitoring well and borehole locations will be surveyed against an geodetic benchmark, or if unavailable, against a suitable arbitrary benchmark. Elevations measured against a geodetic/arbitrary benchmark will be recorded as meters above mean sea level (m AMSL). The elevation survey will be accurate to within ± 0.3 cm.

3.7 Field Measurements of Water Quality Parameters

Prior to collecting the groundwater sample, field measurements of water quality parameters will be recorded from the monitoring wells utilizing low-flow purging and sampling methodologies. Groundwater will be purged from the monitoring wells using a peristaltic pump and dedicated LDPE tubing. Field measurements of dissolved oxygen concentration, electrical conductivity, oxidation-reduction potential, pH, temperature, turbidity and water levels will be recorded in three (3) minute intervals during the purging activities using a pre-calibrated multi probe water quality meter, a turbidity meter and a water level meter. Generally well purging will continued until the purged water has chemically stabilized as indicated by field parameter measurements and the well head drawdown is maintained within 10 cm for 3 consecutive readings. In the event that the parameters do not stabilize or the well head drawdown is too significant, the groundwater is to recover to approximately 75% of static levels before sampling.

The multi-meter electrodes will be calibrated prior to receipt of the meter by the supplier using in-house pH and conductivity reference standards. All collected purged water will be stored on-Site in labeled, sealed containers. Equipment used during groundwater monitoring will be thoroughly cleaned and decontaminated between wells.

3.8 Groundwater Sampling

Upon completion the field measurements of water quality parameters, groundwater samples will be collected for chemical analysis using the peristaltic pump and dedicated LDPE tubing. Recommended groundwater sample volumes will be collected into pre-clean laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. The samples will be placed in an insulated cooler chilled with ice for storage and transport. Samples for BTEX and VOC analysis will be collected in triplicate vials prepared with concentrated hydrochloric acid or an acceptable substitute as a preservative. Each vial will be inverted and inspected for gas bubbles prior to being placed in the cooler to ensure that no head-space is present.

The groundwater sample will be assigned a unique identification number, and the date, time, project number, company name, location and requested analyses will be documented in a bound hard cover notebook. The sample will be submitted to the contractual laboratory within analytical test group holding times under chain of custody protocols. New disposable chemical resistant gloves will be used for each sampling location to prevent sample cross-contamination.

4. Field Quality Assurance/Quality Control Program

The objective of the field quality assurance/quality control (QA/QC) program is to obtain soil and groundwater samples and other field measurements that provide data of acceptable quality that meets the objectives of the Phase Two ESA. The objectives of the QA/QC program will be achieved through the implementation of procedures for the collection of unbiased (i.e. non-contaminated) samples, sample documentation and the collection of appropriate QC samples to provide a measure of sample reproducibility and accuracy. The field QA/QC measures will comprise:

- Decontamination Protocols;
- Equipment Calibration;
- Sample Preservation;
- Sample Documentation; and,
- Field Quality Control Samples.

Details on the field QA/QC measures are provided below.

4.1 Decontamination Protocols

Decontamination protocols will be followed during field sampling where non-dedicated sampling equipment is used to prevent sample cross contamination. For the borehole drilling and soil sampling, soil sampling devices will be cleaned/decontaminated between sampling intervals and auger flights between borehole locations in according with SOP requirements. For the monitoring well installation, well components are not to come into contact with the ground surface prior to insertion into boreholes. Electronic water level meters will be decontaminated between monitoring well locations during well development and purging activities. For hydraulic conductivity tests, the electronic water level meters will be decontaminated between sampling locations. All decontamination fluids will be collected and stored in sealed, labeled containers.

4.2 Equipment Calibration

All equipment requiring calibration will be calibrated in the field according to manufacturer's requirements using analytical grade reagents, or by the supplier prior to conducting field activities, and subsequently checked in the field. The calibration of all pre-calibrated instruments will be checked in the field using analytical grade reagents and re-calibrated as required. For multiple day sampling events, equipment calibration will be checked prior to the beginning of sampling activities. All calibration data will be documented in a bound hard cover notebook.

4.3 Sample Preservation

All samples will be preserved using appropriate analytical test group specific reagents, as required, and upon collection placed in pre-chilled insulated coolers packed with ice for storage and transport.

4.4 Sample Documentation

All samples will be assigned a unique identification number, which is to be recorded along with the date, time, project number, company name, location and requested analysis in a bound field notebook. All samples will be handled and transported following COC protocols.

4.5 Field Quality Control

Field quality control samples will be collected to evaluate the accuracy and reproducibility of the field sampling procedures. For groundwater sampling, one (1) field duplicate is to be collected for every ten (10) samples submitted for chemical analysis. For multiple day sampling events, at least one (1) field duplicate soil and groundwater sample will be submitted for chemical analysis. The field duplicate samples will be assessed by calculating the relative percent difference and comparing to the analytical test group specific acceptance criteria.

Appendix B – Survey Plan

PLAN OF SURVEY SHOWING TOPOGRAPHICAL INFORMATION ON

PART OF LOT 1
SOUTH SIDE OF PARK STREET
EAST OF THE CREDIT RIVER
REGISTERED PLAN 300E

(FORMERLY IN THE VILLAGE OF PORT CREDIT)

CITY OF MISSISSAUGA

REGIONAL MUNICIPALITY OF PEEL

SCALE 1 : 250

5 0 5 10 15 metres

J. D. BARNES LIMITED

METRIC DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

NOTES

BEARINGS ARE UTM GRID, DERIVED FROM REAL TIME NETWORK (RTN) OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2010.0).

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.99975465

■	DENOTES	SURVEY MONUMENT FOUND
□	DENOTES	SURVEY MONUMENT SET
SIB	DENOTES	STANDARD IRON BAR
SSIB	DENOTES	SHORT STANDARD IRON BAR
PB	DENOTES	PALSTIC BAR
IB	DENOTES	IRON BAR
IT	DENOTES	IRON TUBE
RIB	DENOTES	ROUND IRON BAR
CC	DENOTES	CUT CROSS
WT	DENOTES	WITNES
MEAS	DENOTES	MEASURED
INST.	DENOTES	INSTRUMENT
No.	DENOTES	NUMBER
MISS	DENOTES	CITY OF MISSISSAUGA SURVEY DEPARTMENT
P1	DENOTES	PLAN 43R-19415
P2	DENOTES	PLAN 43R-30854
P3	DENOTES	PLAN 43R-31484
P5	DENOTES	PLAN 43R-33186
P6	DENOTES	PLAN OF SURVEY BY C.PEAT, OLS DATED AUG 25,1977
P7	DENOTES	PLAN OF SURVEY BY C.PEAT,OLS DATED OCT 16,1975
P8	DENOTES	BUILDINGS LOCATIONS SURVEY BY TARASICK, McMILLAN LIMITED DATED MAY 3, 1988.

ALL SET PB MONUMENTS WERE USED DUE TO LACK OF OVERBURDEN AND/OR PROXIMITY OF UNDERGROUND UTILITIES IN ACCORDANCE WITH SECTION 11 (4) OF O.REG. 525/91.

BY-LAW 0206-2007 TO DESIGNATE THE CHARLES HAMILTON HOUSE LOCATED AT HIGH STREET EAST AS BEING OF HISTORICAL, ARCHITECTURAL AND CONTEXTUAL SIGNIFICANCE AS IN INST. No. PR1292224

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE RELATED TO GEODETIC DATUM AND ARE DERIVED FROM THE CITY OF MISSISSAUGA BENCHMARKS:
No. 732
ELEVATION=78.128m
No. 731
ELEVATION=81.58m

LOCAL BENCHMARK

LBM1 SANITARY MANHOLE 0.696m FROM THE CENTER LINE OF THE ROAD AT THE INTERSECTION OF ANN STREET AND HIGH STREET.
ELEVATION=80.36m
LBM2 SANITARY MANHOLE 1.345m FROM THE CENTER LINE OF THE ROAD AT THE INTERSECTION OF PARK STREET AND HURONTARIO STREET.
ELEVATION=82.51m

LEGEND

CB	DENOTES CATCHBASIN
TMH	DENOTES TELEPHONE MANHOLE
SAN MH	DENOTES SANITARY MANHOLE
BH	DENOTES BORE HOLE
MW	DENOTES MONITORING WELL
•	DENOTES PILLAR
HP	DENOTES HYDRO POLE
LS	DENOTES LIGHT STANDARD
TSC	DENOTES TRAFFIC SIGNAL CONTROL
TL	DENOTES TRAFFIC SIGNAL
TP	DENOTES TELEPHONE POLE
WV	DENOTES WATER VALVE
WK	DENOTES WATER KEY
PED	DENOTES TELEPHONE PEDESTAL
H	DENOTES FIRE HYDRANT
BM	DENOTES BENCH MARK
FB	DENOTES FLOWER BOX
—T—	DENOTES OVERHEAD TELEPHONE CABLE
—OC—	DENOTES OVERHEAD CABLE
⊙	DENOTES SHRUB

DENOTES CONIFEROUS TREE
DIA=DIAMETER OF TRUNK IN METRES

DENOTES DECIDUOUS TREE
DIA=DIAMETER OF TRUNK IN METRES

BEFORE DIGGING, UNDERGROUND SERVICES SHOULD BE LOCATED ON SITE BY THE RESPECTIVE AGENCIES.

IT IS THE RESPONSIBILTITY OF THE CONTRACTOR TO VERIFY THAT LOCAL BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED AND THAT THE RELATIVE ELEVATIONS AGREE WITH THE INFORMATION SHOWN ON THIS PLAN.

SURVEYOR'S CERTIFICATE

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEY ACT, SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON JANUARY 13, 2020.

JANUARY 28, 2020
DATE

R. S. QUERUBIN
ONTARIO LAND SURVEYOR

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2114719
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR In accordance with Regulation 1026, Section 29(3).

J.D.BARNES LIMITED
SURVEYING MAPPING GIS
LAND INFORMATION SPECIALISTS
401 WHEELABRATOR WAY, SUITE A, MILTON, ON L9T 3C1
T: (905) 875-9955 F: (905) 875-9956 www.jdbarnes.com

DRAWN BY:	CHECKED BY:	REFERENCE NO.:
AD	RSQ	19-30-457-00

FILE: G:\19-30-457\00\Drawing\19-30-457-00-SRPR.dgn DATED: 01/28/2020

PLOTTED: 1/28/2020

Appendix C – Borehole Logs

Log of Borehole 1

Project No. BRM-00239423-E0 Drawing No. 1

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 2

Location: Ann St and High St E, Mississauga, ON

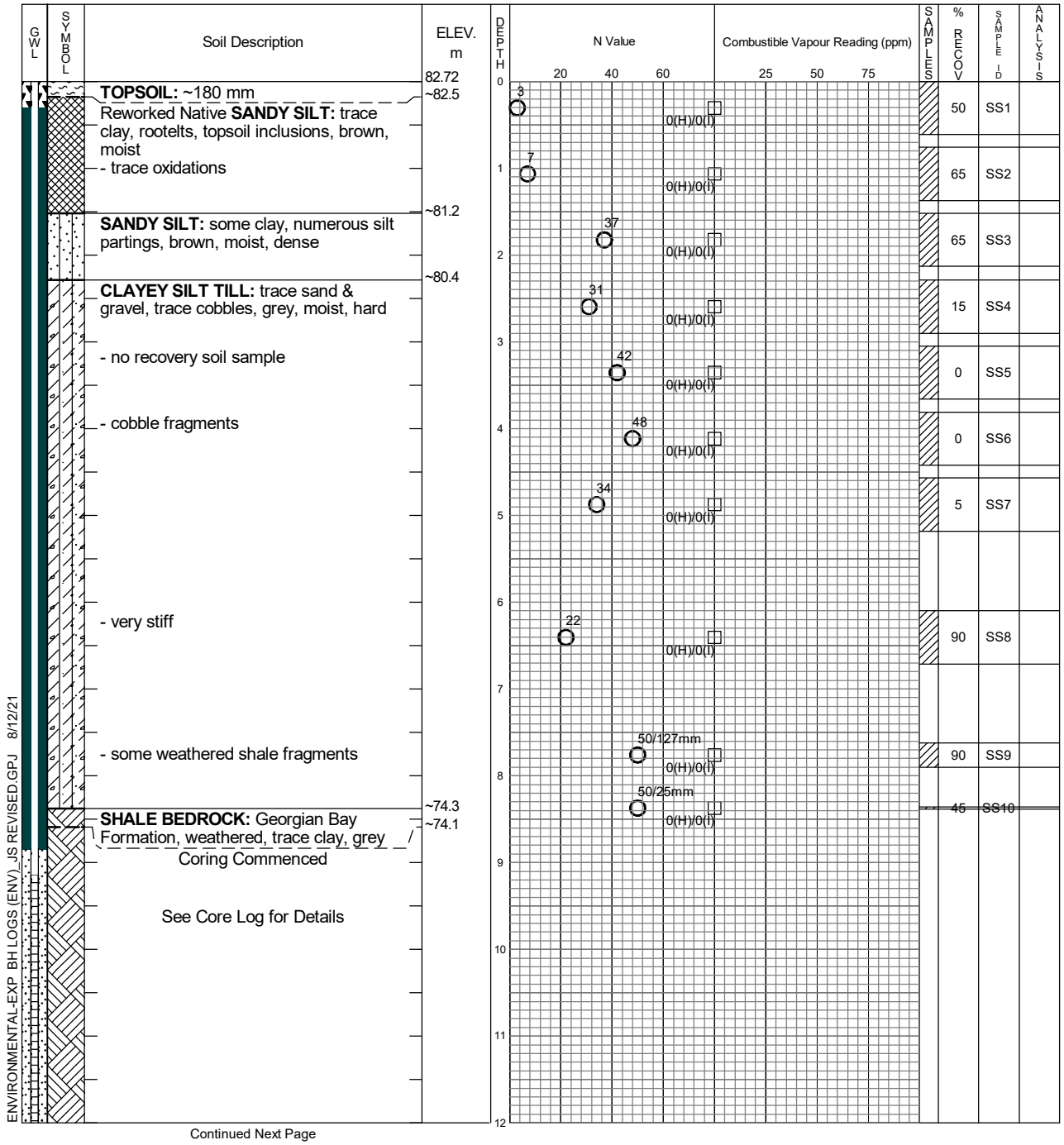
Date Drilled: July 8, 2021

Drill Type: Track - CME 55

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



Continued Next Page

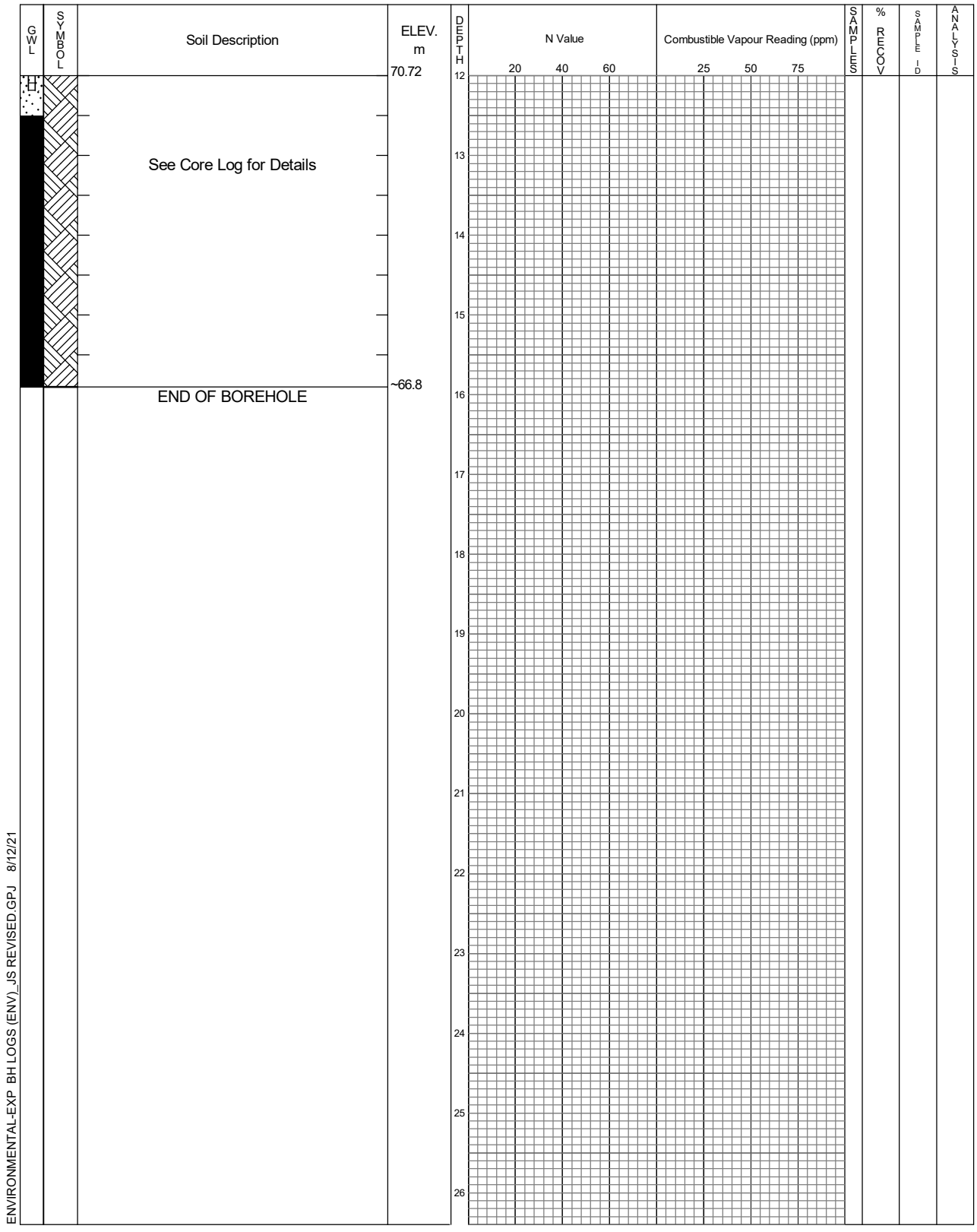
exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	15.9
July 12, 2021	7.51	
July 14, 2021	8.39	
July 15, 2021	8.359	

Log of Borehole 1

Project No. BRM-00239423-E0 Drawing No. 1

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 2 of 2



exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	15.9
July 12, 2021	7.51	
July 14, 2021	8.39	
July 15, 2021	8.359	

Log of Borehole 2

Project No. BRM-00239423-E0 Drawing No. 2

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 2

Location: Ann St and High St E, Mississauga, ON

Date Drilled: June 28, 2021

Drill Type: Truck - CME 75

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			82.38	0	20 40 60	25 50 75				
		ASPHALT: ~ 50mm	~82.3							
		GRANULAR BASE: ~ 125mm	~82.3							
		Reworked Native **CLAYEY SILT:** brown, moist			6	10(H)/0(I)		50	SS1	
		- trace sand, brown, moist		1	6	0(H)/0(I)		85	SS2	
		- silt seams			31	0(H)/0(I)		100	SS3	pH
		- trace gravel	~80.3	2						
		CLAYEY SILT TILL: trace sand and gravel, grey, moist			20	0(H)/0(I)		85	SS4	
				3	40	0(H)/0(I)		80	SS5	
		- trace to some sand		4	38	0(H)/0(I)		80	SS6	
		- trace sand, occasional cobbles			31	0(H)/0(I)		90	SS7	
				5						
				6	31	0(H)/0(I)		100	SS8	
				7						
		- occassional shale fragments			50/102mm	0(H)/0(I)		40	SS9	
				8						
			~73.2	9	50/51mm	0(H)/0(I)		5	SS10	
		SHALE BEDROCK: Georgian Bay Formation, weathered, grey	~73.2							
		Coring Commenced See Core Log for Details		10						
				11						
				12						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

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Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	15.4
July 12, 2021	4.76	
July 14, 2021	6.63	
July 15, 2021	6.365	

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole 2

Project No. BRM-00239423-E0 Drawing No. 2

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 2 of 2

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value 20 40 60	Combustible Vapour Reading (ppm) 25 50 75	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		70.38		12						
		See Core Log for Details		13						
				14						
				15						
		~66.9								
		END OF BOREHOLE		16						
				17						
				18						
				19						
				20						
				21						
				22						
				23						
				24						
				25						
				26						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	15.4
July 12, 2021	4.76	
July 14, 2021	6.63	
July 15, 2021	6.365	

Log of Borehole 3S

Project No. BRM-00239423-E0 Drawing No. 4

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 1

Location: Ann St and High St E, Mississauga, ON

Date Drilled: June 29, 2021

Drill Type: CME 55 Track Mount - Hollow Stem

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			80.96	0
		ASPHALT: ~ 25mm	~80.9	
		GRANULAR BASE: ~ 530mm, occasional cobbles	~80.4	
		FILL: clayey silt, trace sand, brown, moist		1
		- sandy silt, trace oxidations, some clay, wet seams, brown, moist	~79.4	
		SANDY SILT: some clay, fine sand seams, brown, moist	~79.3	2
		CLAYEY SILT TILL: trace sand and gravel, brown, moist		
		- becoming grey		3
		- sand seams		4
		- no sample recovery		5
				6
			~74.9	
		- occassional shale fragments		7
		END OF BOREHOLE at 6.1 mbgs		8
				9
				10
				11
				12

N Value: 20 40 60

Combustible Vapour Reading (ppm): 25 50 75

SAMPLES | % RECOV | SAMPLE ID | ANALYSIS

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)
July 15, 2021	3.792	

Log of Borehole 3D

Project No. BRM-00239423-E0 Drawing No. 3

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 2

Location: Ann St and High St E, Mississauga, ON

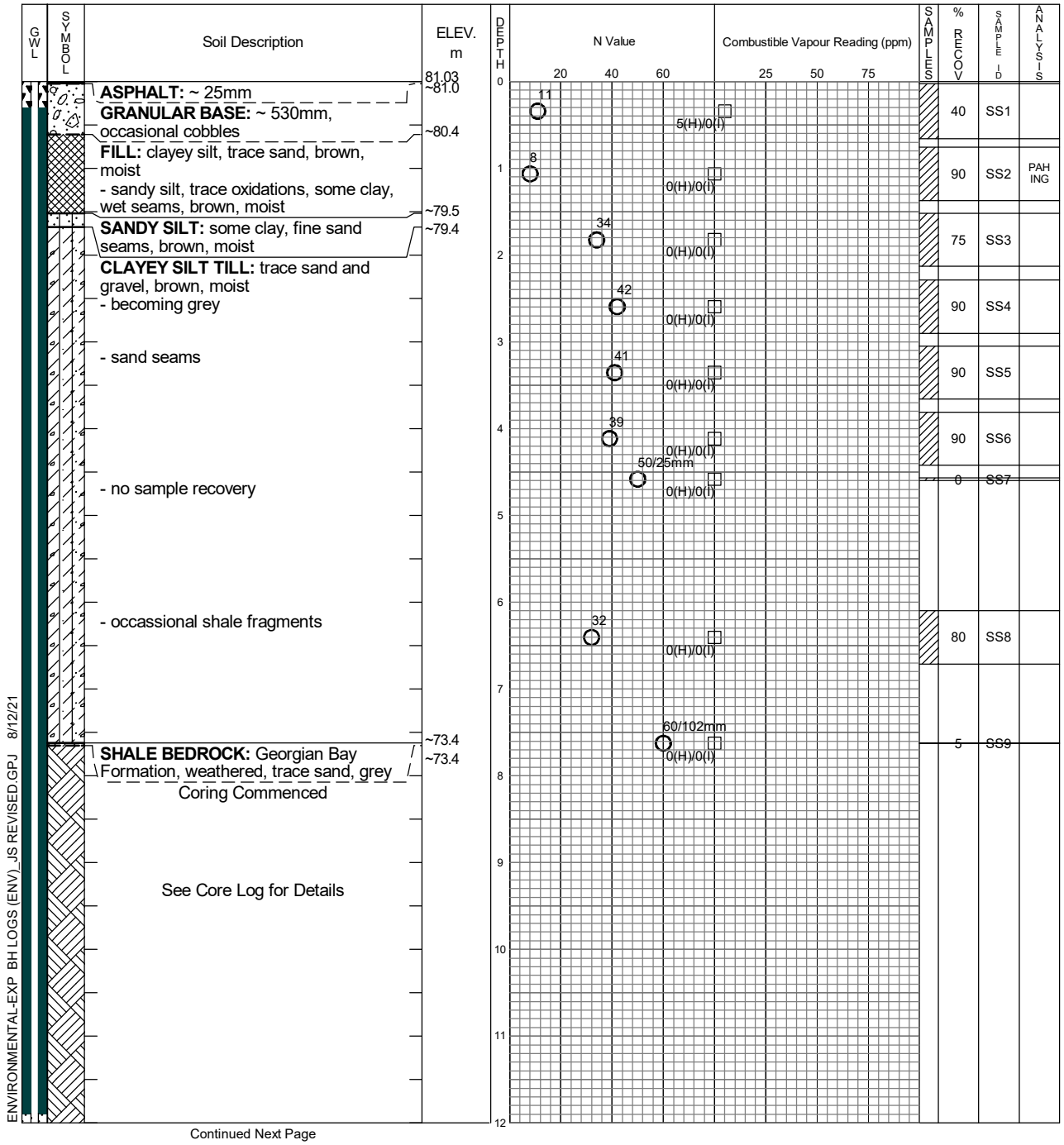
Date Drilled: June 29, 2021

Drill Type: Truck - CME 75

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

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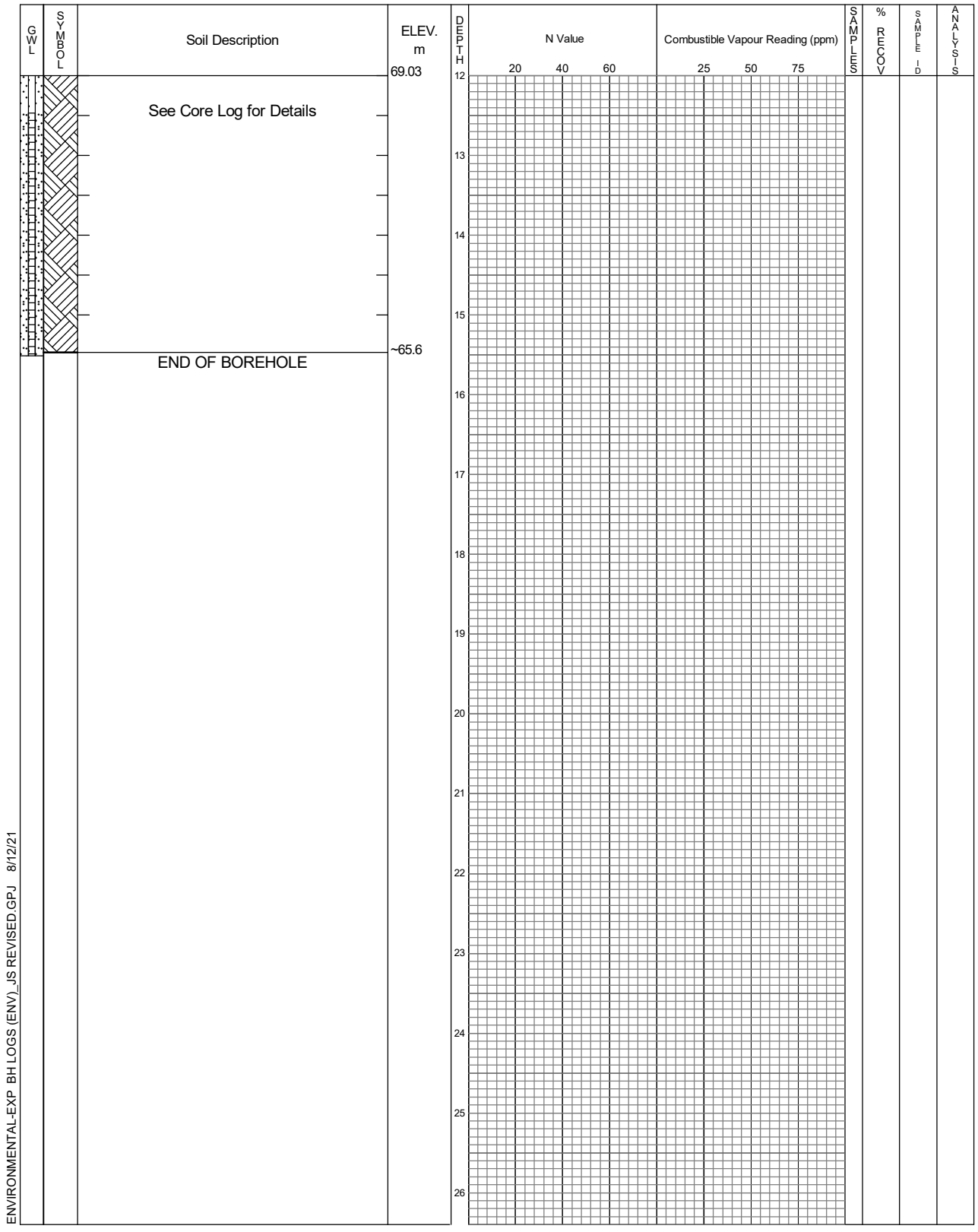
Time	Water Level (m)	Depth to Cave (m)
July 12, 2021	9.83	15.69
July 14, 2021	9.75	
July 15, 2021	9.570	

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole 3D

Project No. BRM-00239423-E0 Drawing No. 3

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 2 of 2



ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)
July 12, 2021	9.83	15.69
July 14, 2021	9.75	
July 15, 2021	9.570	

Log of Borehole 4

Project No. BRM-00239423-E0 Drawing No. 5

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 2

Location: Ann St and High St E, Mississauga, ON

Date Drilled: June 30, 2021

Drill Type: Truck - CME 75

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20 40 60)	Combustible Vapour Reading (ppm) (25 50 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		ASPHALT: ~ 40mm	81.48 ~81.4	0						
		GRANULAR BASE: ~ 200mm	~81.2							
		FILL: sandy silt, asphalt and debris, occasional cobbles, some gravel, brown, moist			9			35	SS1	
		- clayey silt, trace sand & gravel, occasional cobbles, brown, moist	~80.0	1	18			50	SS2	ING (SS1/SS2) PAH (SS1/SS2)
		CLAYEY SILT TILL: trace sand & gravel, some oxidations, brown, moist			28			85	SS3	
		- hit boulder, becoming grey		2	50/102mm			5	SS4	
				3	36			80	SS5	
		- occasional cobbles		4	26			70	SS6	
				5	26			85	SS7	
				6						
		- very moist			15			85	SS8	
				7	50/127mm			20	SS9	
		SHALE BEDROCK: Georgian Bay Formation, highly weathered, grey	~74.0 ~73.9	8						
		Coring Commenced								
		See Core Log for Details		9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

Continued Next Page

Time	Water Level (m)	Depth to Cave (m)

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole 4

Project No. BRM-00239423-E0 Drawing No. 5

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 2 of 2

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			69.48	12	20 40 60	25 50 75				
		See Core Log for Details		13						
				14						
				15						
			~66.1	16						
		END OF BOREHOLE		17						
				18						
				19						
				20						
				21						
				22						
				23						
				24						
				25						
				26						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Time	Water Level (m)	Depth to Cave (m)

Log of Borehole 5S

Project No. BRM-00239423-E0 Drawing No. 7

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 1

Location: Ann St and High St E, Mississauga, ON

Date Drilled: July 5, 2021

Drill Type: CME 55 Track Mount - Hollow Stem

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			82.33	0
		TOPSOIL: ~300mm	~82.0	
		Reworked Native **SANDY SILT:** trace clay and gravel, trace rootlets, topsoil inclusions, brown, moist		1
		- no top soil, very moist to wet	~80.6	
		CLAYEY SILT TILL: trace sand & gravel, trace cobbles, grey, moist		2
				3
				4
				5
				6
		- occasional shale fragments		7
			~74.7	
		END OF BOREHOLE at 7.62 mbgs		8
				9
				10
				11
				12

N Value: 20, 40, 60

Combustible Vapour Reading (ppm): 25, 50, 75

SAMPLES | % RECOV | SAMPLE ID | ANALYSIS

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

Time	Water Level (m)	Depth to Cave (m)
July 15, 2021	5.826	

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole 5D

Project No. BRM-00239423-E0 Drawing No. 6

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 2

Location: Ann St and High St E, Mississauga, ON

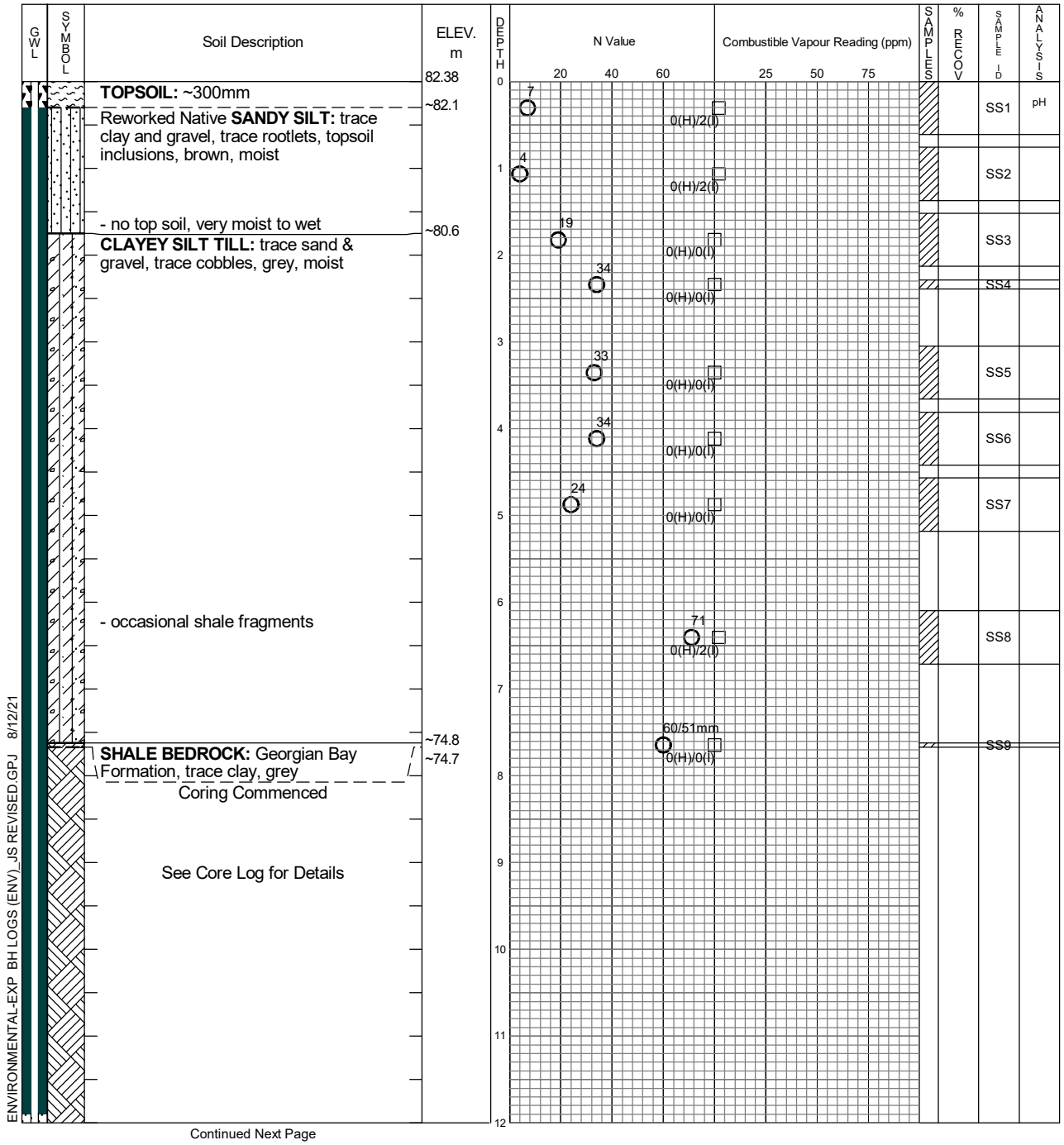
Date Drilled: July 5, 2021

Drill Type: Truck - CME 75

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		



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Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	15.47
July 12, 2021	7.96	
July 14, 2021	11.19	
July 15, 2021	10.179	

exp Services Inc.
Markham, Ontario
Telephone: 905.695.3217

Log of Borehole 5D

Project No. BRM-00239423-E0 Drawing No. 6

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 2 of 2

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			70.38	12	20 40 60	25 50 75				
		See Core Log for Details		13						
				14						
				15						
			~66.9	16						
		END OF BOREHOLE		17						
				18						
				19						
				20						
				21						
				22						
				23						
				24						
				25						
				26						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

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Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	15.47
July 12, 2021	7.96	
July 14, 2021	11.19	
July 15, 2021	10.179	

Log of Borehole 6

Project No. BRM-00239423-E0 Drawing No. 8

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 2

Location: Ann St and High St E, Mississauga, ON

Date Drilled: July 6, 2021

Drill Type: Truck - CME 75

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		Reworked Native **SANDY SILT:** trace clay, top soil inclusions, brown, moist	82.09	0	6	0(H)/0(I)		70	SS1	
		- very moist		1	9	0(H)/0(I)		75	SS2	
		- brown to grey, wet		2	17	0(H)/2(I)		75	SS3	
		- trace to some gravel, very moist		2	29	0(H)/0(I)		35	SS4	
			~79.0	3	33	0(H)/0(I)		85	SS5	pH
		CLAYEY SILT TILL: trace sand and gravel, grey, moist		4	31	0(H)/0(I)		85	SS6	
		- occasional cobbles		5	35	0(H)/0(I)		15	SS7	
		- occasional shale fragments		6	35	0(H)/0(I)		90	SS8	
			~74.5	7	50/127mm	0(H)/0(I)		10	SS9	
		SHALE BEDROCK: Georgian Bay Formation, trace sand, some clay, grey	~74.3	8						
		Coring Commenced		9						
		See Core Log for Details		10						
				11						
				12						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

Continued Next Page

Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	14.33
July 12, 2021	8.34	
July 14, 2021	8.44	
July 15, 2021	8.321	

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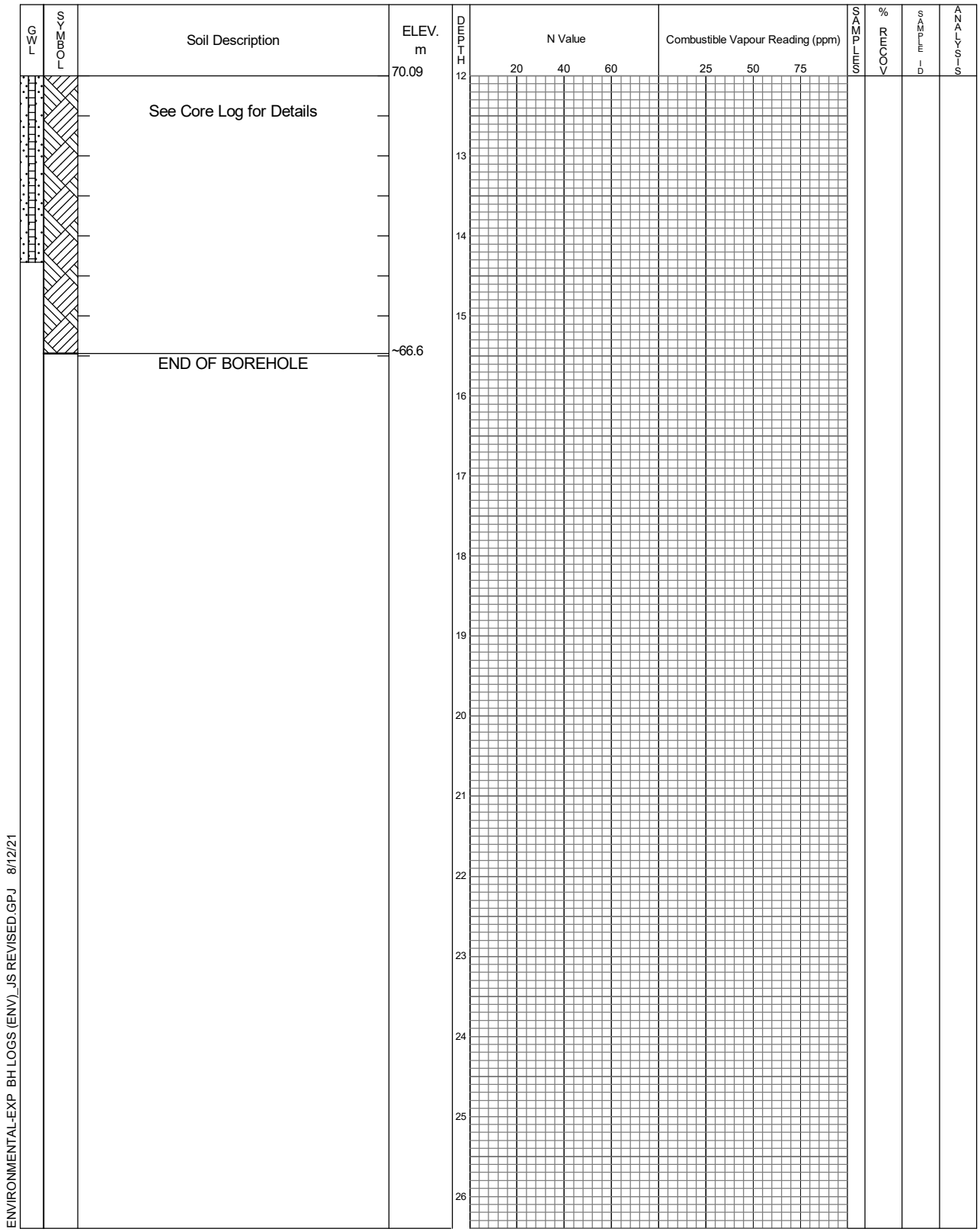
Log of Borehole 6

Project No. BRM-00239423-E0 Drawing No. 8

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 2 of 2



ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

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Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	14.33
July 12, 2021	8.34	
July 14, 2021	8.44	
July 15, 2021	8.321	

Log of Borehole 7

Project No. BRM-00239423-E0 Drawing No. 9

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 2

Location: Ann St and High St E, Mississauga, ON

Date Drilled: July 7, 2021

Drill Type: Truck - CME 75

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			82.21	0						
		TOPSOIL: ~ 150mm	~82.1							
		Reworked Native**SANDY SILT:** some clay, rootelts, trace ash, brown, moist			5	0(H)/2(I)		50	SS1	
		- clay pockets		1	13	0(H)/0(I)		70	SS2	
			~80.7		31	0(H)/0(I)		90	SS3	
		CLAYEY SILT TILL: trace sand and gravel, occasional cobbles, brown, moist		2		62/230mm 0(H)/2(I)		65	SS4	
		- becoming grey		3	39	0(H)/0(I)		70	SS5	
		- no sample recovery		4	50/25mm	0(H)/0(I)		0	SS6	
				5	30	0(H)/0(I)		85	SS7	
		- clay seams, very moist		6	13	0(H)/0(I)		90	SS8	
		- some shale fragments	~74.4	7						
		SHALE BEDROCK: Georgian Bay Formation, trace clay, grey	~74.2	8		96/203mm 0(H)/0(I)		55	SS9	
		Coring Commenced								
		See Core Log for Details		9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

Continued Next Page

Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	15.9
July 12, 2021	8.71	
July 14, 2021	10.65	
July 15, 2021	10.5	

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Log of Borehole 7

Project No. BRM-00239423-E0 Drawing No. 9

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 2 of 2

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
			70.21	12	20 40 60	25 50 75				
		See Core Log for Details		13						
				14						
				15						
			~66.3	16						
		END OF BOREHOLE		17						
				18						
				19						
				20						
				21						
				22						
				23						
				24						
				25						
				26						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

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Time	Water Level (m)	Depth to Cave (m)
On completion	N/A	15.9
July 12, 2021	8.71	
July 14, 2021	10.65	
July 15, 2021	10.5	

Log of Borehole 8

Project No. BRM-00239423-E0 Drawing No. 10

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 1

Location: Ann St and High St E, Mississauga, ON

Date Drilled: June 30, 2021

Drill Type: CME 55 Track Mount - Hollow Stem

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value (20, 40, 60)	Combustible Vapour Reading (ppm) (25, 50, 75)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		ASPHALT: ~ 40mm	81.59	0						
		GRANULAR BASE: ~ 280mm	~81.6							
		FILL: sandy silt, trace clay, brown, moist	~81.3		5			50	SS1	
		- wet		1	8			85	SS2	PAH (SS1/SS2) ING (SS1/SS2)
		CLAYEY SILT TILL: trace sand and gravel, brown, moist	~80.1	2	29			85	SS3	
		- stone fragments			69			40	SS4	
				3	35			85	SS5	
		- occasional cobbles		4	45			65	SS6	
					68/180mm			50	SS7	
		END OF BOREHOLE	~76.7	5						
				6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

Time	Water Level (m)	Depth to Cave (m)
On completion	Dry	4.57

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Log of Borehole 9

Project No. BRM-00239423-E0 Drawing No. 11

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 1

Location: Ann St and High St E, Mississauga, ON

Date Drilled: June 30, 2021

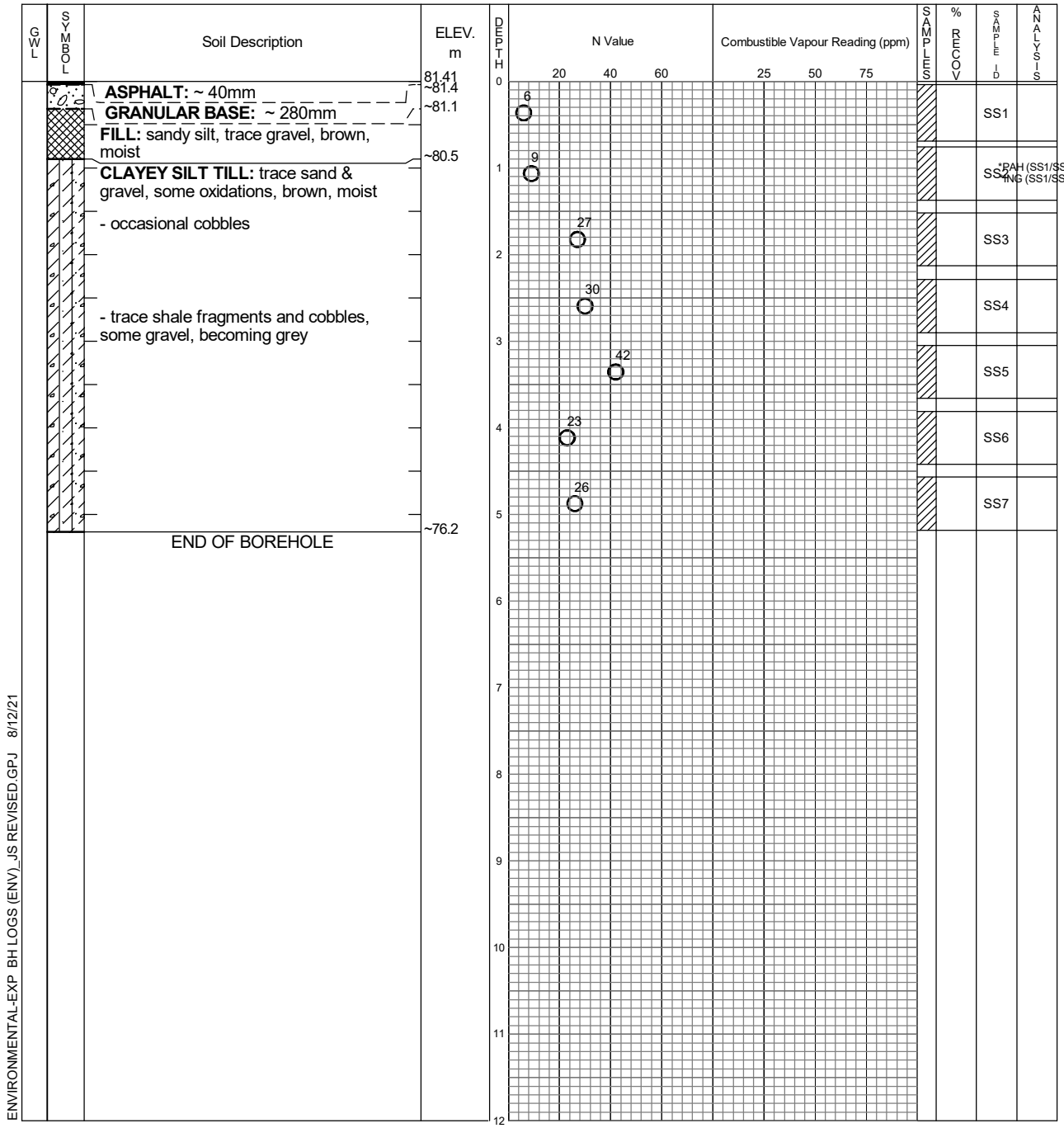
Drill Type: CME 55 Track Mount - Hollow Stem

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH
			81.41	0
		ASPHALT: ~ 40mm	~81.4	
		GRANULAR BASE: ~ 280mm	~81.1	
		FILL: sandy silt, trace gravel, brown, moist	~80.5	1
		CLAYEY SILT TILL: trace sand & gravel, some oxidations, brown, moist		
		- occasional cobbles		2
		- trace shale fragments and cobbles, some gravel, becoming grey		3
				4
			~76.2	5
		END OF BOREHOLE		6
				7
				8
				9
				10
				11
				12



SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		SS1	
		SS2	*PAH (SS1/SS2) *ING (SS1/SS2)
		SS3	
		SS4	
		SS5	
		SS6	
		SS7	

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

Time	Water Level (m)	Depth to Cave (m)
On completion	Dry	4.57

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Log of Borehole 10

Project No. BRM-00239423-E0 Drawing No. 12

Project: Environmental, Geotechnical and Hydrogeological Investigation Sheet No. 1 of 1

Location: Ann St and High St E, Mississauga, ON

Date Drilled: July 7, 2021

Drill Type: CME 55 Track Mount - Hollow Stem

Datum: Geodetic

Chemical Analysis

BTEX	Benzene, Toluene, Ethylbenzene and Xylenes	*	Duplicate Sample
ING	Metals and Inorganics	PCB	Polychlorinated Biphenyls
MET	Metals	PHC	Petroleum Hydrocarbons (F1-F4)
PAH	Polycyclic Aromatic Hydrocarbons	VOC	Volatile Organic Compounds
PEST	Organochlorine Pesticides		

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH	N Value	Combustible Vapour Reading (ppm)	SAMPLES	% RECOV	SAMPLE ID	ANALYSIS
		TOPSOIL: ~ 180mm	81.21	0	6	0(H)/2(I)		20	SS1	
			~81.0							
		FILL: sandy silt, topsoil inclusions, brown, moist		1	6	10(H)/2(I)		85	SS2	PAH
		- trace clay								
		- trace rootlets, some oxidations, wet		2	6	0(H)/2(I)		85	SS3	ING
			~78.6		25	0(H)/0(I)		70	SS4	
		CLAYEY SILT TILL: trace gravel and sand, sandy silt seams, brown, moist		3	34	0(H)/0(I)		85	SS5	
				4	43	0(H)/0(I)		85	SS6	
				5	31	0(H)/0(I)		75		
			~75.9							
		END OF BOREHOLE		6						
				7						
				8						
				9						
				10						
				11						
				12						

ENVIRONMENTAL-EXP BH LOGS (ENV)_JS REVISED.GPJ 8/12/21

Time	Water Level (m)	Depth to Cave (m)
On completion	Dry	4.57

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Appendix D – Analytical Results

Petroleum Hydrocarbons (PHCs) and Volatile Organic Compounds (VOCs) in Water

446 Colborne Street, Brantford, Ontario

Parameter	*Criteria* [1]	*Units*	*RDL*	*Sample ID*				
				BV Labs Job ID / Sample ID				
				Sample Collection Date				
				Sample Collection Time				
				MW1 C1J9203 / QCV806 Jul 15, 2021 AM	MW11 C1J9203 / QCV807 Jul 15, 2021 AM	MW35 (MW3S) C1J9203 / QCV808 Jul 16, 2021 AM	MW5D C1J9203 / QCV809 Jul 16, 2021 AM	TRIP BLANK C1J9203 / QCV811 Jul 16, 2021 AM
Petroleum Hydrocarbons (PHCs)								
F1 (C6-C10)	750	ug/L	25	-	-	<25	-	-
F1 (C6-C10) - BTEX	750	ug/L	25	-	-	<25	-	-
F2 (C10-C16)	150	ug/L	100	-	-	<100	-	-
F3 (C16-C34)	500	ug/L	200	-	-	<200	-	-
F4 (C34-C50)	500	ug/L	200	-	-	<200	-	-
Reached Baseline at C50	NV	ug/L	-	-	-	YES	-	-
F4G (Gravimetric)	500	ug/L	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)								
Benzene	5	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	24	ug/L	0.2	<0.20	0.21	<0.20	<0.20	<0.20
Ethylbenzene	2.4	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
m+p-Xylene	NV	ug/L	0.2-0.4	<0.20	<0.20	<0.40	<0.20	<0.20
o-Xylene	NV	ug/L	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Xylenes, Total	300	ug/L	0.2-0.4	<0.20	<0.20	<0.40	<0.20	<0.20
Acetone	2700	ug/L	10	22	46	-	<10	<10
Bromodichloromethane	16	ug/L	0.5	0.7	0.74	-	1	<0.50
Bromoform	25	ug/L	1	<1.0	<1.0	-	<1.0	<1.0
Bromomethane	0.89	ug/L	0.5	<0.50	<0.50	-	<0.50	<0.50
Carbon Tetrachloride	5	ug/L	0.19	<0.19	<0.19	-	<0.19	<0.19
Chlorobenzene	30	ug/L	0.2	<0.20	<0.20	-	<0.20	<0.20
Chloroform	22	ug/L	0.2	2.1	2.2	-	2	<0.20
Dibromochloromethane	25	ug/L	0.5	<0.50	<0.50	-	0.61	<0.50
1,2-Dichlorobenzene	3	ug/L	0.4	<0.40	<0.40	-	<0.40	<0.40
1,3-Dichlorobenzene	59	ug/L	0.4	<0.40	<0.40	-	<0.40	<0.40
1,4-Dichlorobenzene	1	ug/L	0.4	<0.40	<0.40	-	<0.40	<0.40
Dichlorodifluoromethane	590	ug/L	1.0	<1.0	<1.0	-	<1.0	<1.0
1,1-Dichloroethane	5	ug/L	0.2	<0.20	<0.20	-	<0.20	<0.20
1,2-Dichloroethane	5	ug/L	0.49	<0.49	<0.49	-	<0.49	<0.49
1,1-Dichloroethylene	14	ug/L	0.2	<0.20	<0.20	-	<0.20	<0.20
cis-1,2-Dichloroethylene	17	ug/L	0.5	<0.50	<0.50	-	<0.50	<0.50
trans-1,2-Dichloroethylene	17	ug/L	0.5	<0.50	<0.50	-	<0.50	<0.50
1,2-Dichloropropane	5	ug/L	0.2	<0.20	<0.20	-	<0.20	<0.20
cis-1,3-Dichloropropene	NV	ug/L	0.3	<0.30	<0.30	-	<0.30	<0.30
trans-1,3-Dichloropropene	NV	ug/L	0.4	<0.40	<0.40	-	<0.40	<0.40
1,3-Dichloropropene (cis+trans)	0.5	ug/L	0.50	<0.50	<0.50	-	<0.50	<0.50
Ethylene Dibromide	0.2	ug/L	0.19	<0.19	<0.19	-	<0.19	<0.19
Hexane	520	ug/L	1.0	<1.0	<1.0	-	<1.0	<1.0
Methyl Ethyl Ketone (MEK)	1800	ug/L	10	<10	<10	-	<10	<10
Methyl Isobutyl Ketone (MIBK)	640	ug/L	5	<5.0	<5.0	-	<5.0	<5.0
Methyl tert-butyl ether (MTBE)	15	ug/L	0.5	<0.50	<0.50	-	<0.50	<0.50
Methylene Chloride (Dichloromethane)	50	ug/L	2	<2.0	<2.0	-	<2.0	<2.0
Styrene	5.4	ug/L	0.4	<0.40	<0.40	-	<0.40	<0.40
1,1,1,2-Tetrachloroethane	1.1	ug/L	0.5	<0.50	<0.50	-	<0.50	<0.50
1,1,2,2-Tetrachloroethane	1	ug/L	0.4	<0.40	<0.40	-	<0.40	<0.40
Tetrachloroethylene	17	ug/L	0.2	<0.20	<0.20	-	<0.20	<0.20
1,1,1-Trichloroethane	200	ug/L	0.2	<0.20	<0.20	-	<0.20	<0.20
1,1,2-Trichloroethane	5	ug/L	0.4	<0.40	<0.40	-	<0.40	<0.40
Trichloroethylene	5	ug/L	0.2	<0.20	<0.20	-	<0.20	<0.20
Trichlorofluoromethane	150	ug/L	0.50	<0.50	<0.50	-	<0.50	<0.50
Vinyl Chloride	1.7	ug/L	0.2	<0.20	<0.20	-	<0.20	<0.20

Legend	
To Be Announced	TBA
Exceeds one Criteria	**Result**
Exceeds two Criteria	**Result**
DL > Criteria	Result
Criteria 1	Reg153/04 T2-GW-Medium-Fine

Petroleum Hydrocarbons (PHCs) and Volatile Organic Compounds (VOCs) in Water

446 Colborne Street, Brantford, Ontario

Parameter	*Criteria* [1]	*Units*	*RDL*	*Sample ID*		
				BV Labs Job ID / Sample ID		
				Sample Collection Date		
				Sample Collection Time		
				MW1 C1J9203 / QCV806 Jul 15, 2021 AM	MW11 C1J9203 / QCV807 Jul 15, 2021 AM	MW5D C1J9203 / QCV809 Jul 16, 2021 AM
Metals (Including Hydride-Forming Metals)						
Dissolved Antimony (Sb)	6	ug/L	0.5	1.6	1.6	0.91
Dissolved Arsenic (As)	25	ug/L	1	1.7	1.7	1.3
Dissolved Barium (Ba)	1000	ug/L	2	170	160	150
Dissolved Beryllium (Be)	4	ug/L	0.4	<0.40	<0.40	<0.40
Dissolved Boron (B)	5000	ug/L	10	1800	2000	1400
Dissolved Cadmium (Cd)	2.7	ug/L	0.09	<0.090	<0.090	<0.090
Dissolved Chromium (Cr)	50	ug/L	5	<5.0	<5.0	<5.0
Dissolved Cobalt (Co)	3.8	ug/L	0.5	<0.50	<0.50	0.79
Dissolved Copper (Cu)	87	ug/L	0.9	<0.90	<0.90	<0.90
Dissolved Lead (Pb)	10	ug/L	0.5	<0.50	<0.50	<0.50
Dissolved Molybdenum (Mo)	70	ug/L	0.5	7.1	6.6	3.5
Dissolved Nickel (Ni)	100	ug/L	1	1.7	<1.0	1.5
Dissolved Selenium (Se)	10	ug/L	2	<2.0	<2.0	<2.0
Dissolved Silver (Ag)	1.5	ug/L	0.09	<0.090	<0.090	<0.090
Dissolved Thallium (Tl)	2	ug/L	0.05	<0.050	<0.050	<0.050
Dissolved Uranium (U)	20	ug/L	0.1	1.7	1.6	2.5
Dissolved Vanadium (V)	6.2	ug/L	0.5	<0.50	<0.50	<0.50
Dissolved Zinc (Zn)	1100	ug/L	5	<5.0	<5.0	<5.0
Sodium						
Dissolved Sodium (Na)	490000	ug/L	500	**800000**	**820000**	**1300000**
Other Regulated Parameters						
Dissolved Chloride (Cl-)	790	-	-	-	-	-
WAD Cyanide (Free)	66	-	-	-	-	-
Hexavalent Chromium (CrVI)	25	ug/L	0.5	<0.50	<0.50	<0.50
Mercury (Hg)	1	ug/L	0.1	<0.10	<0.10	<0.10

Legend	
NV	No Value
Exceeds one Criteria	**Result**
Exceeds two Criteria	**Result**
DL > Criteria	Result
Criteria 1	Reg153/04 T2-GW-Medium-Fine

Chlorophenols (CPs) in Water

Parameter	*Criteria* [1]	*Units*	*RDL*	*Sample ID*	
				BV Labs Job ID / Sample ID	
				Sample Collection Date	
				Sample Collection Time	
				MW1 C1J9203 / QCV806 Jul 15, 2021 AM	MW5D C1J9203 / QCV809 Jul 16, 2021 AM
Chlorophenols (CPs)					
2-Chlorophenol	8.9	ug/L	0.1	<0.1	<0.1
2,4-Dichlorophenol	20	ug/L	0.1	<0.1	<0.1
Pentachlorophenol	30	ug/L	0.1	<0.1	<0.1
2,4,5-Trichlorophenol	8.9	ug/L	0.1	<0.1	<0.1
2,4,6-Trichlorophenol	2	ug/L	0.1	<0.1	<0.1

Legend	
To Be Announced	TBA
Exceeds one Criteria	**Result**
Exceeds two Criteria	**Result**
DL > Criteria	Result
Criteria 1	Reg153/04 T2-GW-Medium-Fine

Polycyclic Aromatic Hydrocarbons (PAHs) in Soil

84, 90 High Street East and 17, 19 Ann Street, Mississauga, Ontario

Parameter	*Criteria* [1]	*Units*	*RDL*	*Sample ID*					
				BV Labs Job ID / Sample ID					
				Sample Collection Date					
				Sample Collection Time					
				BH3 SS2 C1I8144 / QAO297 Jul 04, 2021 AM	BH4 SS1/SS2 C1I8144 / QAO298 Jul 04, 2021 AM	BH8 SS1/SS2 C1I8144 / QAO299 Jul 04, 2021 AM	BH9 SS1/SS2 C1I8144 / QAO300 Jul 04, 2021 AM	BH99 SS1/SS2 C1I8144 / QAO301 Jul 04, 2021 AM	BH10 SS2 C1J5051 / QCA122 Jul 08, 2021 AM
Polycyclic Aromatic Hydrocarbons (PAHs)									
Acenaphthene	29	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Acenaphthylene	0.17	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Anthracene	0.74	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)anthracene	0.63	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(a)pyrene	0.3	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(b/j)fluoranthene	0.78	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0062
Benzo(g,h,i)perylene	7.8	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Benzo(k)fluoranthene	0.78	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Chrysene	7.8	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dibenzo(a,h)anthracene	0.1	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Fluoranthene	0.69	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0066
Fluorene	69	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Indeno(1,2,3-cd)pyrene	0.48	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
1-Methylnaphthalene	3.4	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0068
2-Methylnaphthalene	3.4	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.006
1+2-Methylnaphthalene	3.4	ug/g	0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	0.013
Naphthalene	0.75	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Phenanthrene	7.8	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0063
Pyrene	78	ug/g	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0061

Legend	
To Be Announced	TBA
Exceeds one Criteria	**Result**
Exceeds two Criteria	**Result**
DL > Criteria	Result
Criteria 1	Reg153/04 T2-Soil/Res-Medium-Fine

Metals and Inorganics in Soil

84, 90 High Street East and 17, 19 Ann Street, Mississauga, Ontario

Parameter	Criteria [1]	Units	RDL	Sample ID								
				BV Labs Job ID / Sample ID								
				Sample Collection Date								
				Sample Collection Time								
				BH2 SS3	BH3 SS2	BH4 SS1/SS2	BH5 SS1	BH6 SS5	BH8 SS1/SS2	BH9 SS1/SS2	BH99 SS1/SS2	BH10 SS3
				C1I8144 / QAO296	C1I8144 / QAO296	C1I8144 / QAO298	C1I8137 / QAO258	C1I8137 / QAO259	C1I8144 / QAO299	C1I8144 / QAO300	C1I8144 / QAO301	C1J5051 / QCA123
				Jul 04, 2021	Jul 04, 2021	Jul 04, 2021	Jul 07, 2021	Jul 07, 2021	Jul 04, 2021	Jul 04, 2021	Jul 04, 2021	Jul 08, 2021
				AM	AM	AM	AM	AM	AM	AM	AM	AM
Metals (including Hydride-Forming Metals)												
Acid Extractable Antimony (Sb)	7.5	ug/g	0.2	-	<0.20	<0.20	-	-	<0.20	<0.20	<0.20	<0.20
Acid Extractable Arsenic (As)	18	ug/g	1	-	3.3	5.5	-	-	1.8	2.4	2.5	1.4
Acid Extractable Barium (Ba)	390	ug/g	0.5	-	72	91	-	-	27	48	29	20
Acid Extractable Beryllium (Be)	5	ug/g	0.2	-	0.56	0.88	-	-	0.26	0.39	0.3	0.23
Acid Extractable Boron (B)	120	ug/g	5	-	6.6	9.1	-	-	<5.0	<5.0	<5.0	<5.0
Acid Extractable Cadmium (Cd)	1.2	ug/g	0.1	-	<0.10	0.11	-	-	<0.10	<0.10	<0.10	<0.10
Acid Extractable Chromium (Cr)	160	ug/g	1	-	19	24	-	-	8.6	13	10	8
Acid Extractable Cobalt (Co)	22	ug/g	0.1	-	9.6	15	-	-	4.2	6.5	4.5	3.9
Acid Extractable Copper (Cu)	180	ug/g	0.5	-	20	29	-	-	8.6	14	10	8.7
Acid Extractable Lead (Pb)	120	ug/g	1	-	7.1	12	-	-	5.4	6.6	5.6	3
Acid Extractable Molybdenum (Mo)	6.9	ug/g	0.5	-	<0.50	<0.50	-	-	<0.50	<0.50	<0.50	<0.50
Acid Extractable Nickel (Ni)	130	ug/g	0.5	-	21	32	-	-	8.2	13	9.1	7
Acid Extractable Selenium (Se)	2.4	ug/g	0.5	-	<0.50	<0.50	-	-	<0.50	<0.50	<0.50	<0.50
Acid Extractable Silver (Ag)	25	ug/g	0.2	-	<0.20	<0.20	-	-	<0.20	<0.20	<0.20	<0.20
Acid Extractable Thallium (Tl)	1	ug/g	0.05	-	0.12	0.14	-	-	<0.050	0.086	0.061	<0.050
Acid Extractable Uranium (U)	23	ug/g	0.05	-	0.4	0.48	-	-	0.36	0.37	0.34	0.28
Acid Extractable Vanadium (V)	86	ug/g	5	-	29	34	-	-	17	21	19	16
Acid Extractable Zinc (Zn)	340	ug/g	5	-	47	73	-	-	18	33	23	16
Other Regulated Parameters												
Hot Water Extractable Boron	1.5	ug/g	0.05	-	0.098	0.26	-	-	0.13	0.07	0.095	0.064
WAD Cyanide (Free)	0.051	ug/g	0.01	-	-	-	-	-	-	-	-	<0.01
Electrical Conductivity	0.7	mS/cm	0.002	-	0.28	0.45	-	-	0.65	0.59	-	0.26
Hexavalent Chromium (CrVI)	10	ug/g	0.18	-	<0.18	<0.18	-	-	<0.18	<0.18	<0.18	<0.18
Acid Extractable Mercury (Hg)	1.8	ug/g	0.05	-	<0.050	<0.050	-	-	<0.050	<0.050	<0.050	<0.050
Available (CaCl2) pH	-	pH	-	7.89	7.74	-	7.76	7.8	-	-	-	7.6
Sodium Adsorption Ratio	5	N/A	-	-	2.3	3.2	-	-	13	3.9	-	1.5

Legend	
To Be Announced	TBA
Exceeds one Criteria	Result
Exceeds two Criteria	Result
DL > Criteria	Result
Criteria 1	Reg153/04 T2-Soil/Res-Medium-Fine

Appendix E – Laboratory Certificate of Analysis

Your Project #: BRM-00239423-E0
Your C.O.C. #: 818503-03-01

Attention: Samuel Lee

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/07/12
Report #: R6715596
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1I8137
Received: 2021/07/07, 16:10

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH CaCl2 EXTRACT	2	2021/07/12	2021/07/12	CAM SOP-00413	EPA 9045 D m
Sieve, 75um	1	N/A	2021/07/12	CAM SOP-00467	ASTM D1140 -17 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: BRM-00239423-E0
Your C.O.C. #: 818503-03-01

Attention: Samuel Lee

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/07/12
Report #: R6715596
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1I8137
Received: 2021/07/07, 16:10

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Patricia Legette, Project Manager
Email: Patricia.Legette@bureauveritas.com
Phone# (905)817-5799

==========

This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1I8137
Report Date: 2021/07/12

exp Services Inc
Client Project #: BRM-00239423-E0
Sampler Initials: JB

RESULTS OF ANALYSES OF SOIL

BV Labs ID		QAO258		QAO259		
Sampling Date		2021/07/07		2021/07/07		
COC Number		818503-03-01		818503-03-01		
	UNITS	**BH5 SS1**	**QC Batch**	**BH6 SS5**	**RDL**	**QC Batch**
Inorganics						
Available (CaCl2) pH	pH	7.76	7456662	7.80		7456662
Miscellaneous Parameters						
Grain Size	%			FINE	N/A	7455845
Sieve - #200 (<0.075mm)	%			77	1	7455845
Sieve - #200 (>0.075mm)	%			23	1	7455845

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
N/A = Not Applicable

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: C1I8137
Report Date: 2021/07/12

exp Services Inc
Client Project #: BRM-00239423-E0
Sampler Initials: JB

TEST SUMMARY

BV Labs ID: QAO258
Sample ID: BH5 SS1
Matrix: Soil

Collected: 2021/07/07
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7456662	2021/07/12	2021/07/12	Surinder Rai

BV Labs ID: QAO259
Sample ID: BH6 SS5
Matrix: Soil

Collected: 2021/07/07
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7456662	2021/07/12	2021/07/12	Surinder Rai
Sieve, 75um	SIEV	7455845	N/A	2021/07/12	Gurpreet Kaur (ONT)

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C

Results relate only to the items tested.

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BV Labs Job #: C1I8137
Report Date: 2021/07/12

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: BRM-00239423-E0
Sampler Initials: JB

			SPIKED BLANK		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	Value (%)	QC Limits	% Recovery	QC Limits
7455845	Sieve - #200 (<0.075mm)	2021/07/12			0.20	20	55	53 - 58
7455845	Sieve - #200 (>0.075mm)	2021/07/12			10	20	45	42 - 47
7456662	Available (CaCl2) pH	2021/07/12	100	97 - 103	0.12	N/A		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

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BV Labs Job #: C1I8137
Report Date: 2021/07/12

exp Services Inc
Client Project #: BRM-00239423-E0
Sampler Initials: JB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

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Bureau Veritas Laboratories
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvlabs.com

Page 1 of 1

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#9590 exp Services Inc	Company Name:	SAMUEL LEE	Quotation #:	~~B91716~~ STREAM 1	BV Labs Job #:	Bottle Order #: 818503
Attention:	Central Services	Attention:	~~Trevor Anthony~~	P.O. #:			
Address:	1595 Clark Blvd Brampton ON L6T 4V1	Address:	SAMUEL.LEE@EXP.COM	Project:	~~BRM-21004879-A0~~	COC #: C#818503-03-01	Project Manager: Christine Gripton
Tel:	(905) 793-9800 Fax: (905) 793-0641	Tel:	Fax:	Project Name:	BRM-00239423-E0		
Email:	AP@exp.com; Karen.Burke@exp.com	Email:	~~Trevor.Anthony@exp.com~~	Site #:			
				Sampled By:			

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BV LABS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☒ Res/Park ☐ Medium/Fine
- ☒ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☒ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558 ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Field Filtered (please circle): Metals / Hg / Cr VI

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	PHCs, BTEX/F1-F4	VOCs by HS	Metals & Inorganics Pkg	pH	Grain Size	# of Bottles	Comments
1		BH5 SS1	JULY/21	Am	GW S				X		1	
2		BH6 SS#5	JULY/21	Am	GW S				X	X	1	
3					GW							
4					GW							
5					GW							
6					GW							
7					GW							
8												
9												
10												

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

07-Jul-21 16:10
Christine Gripton
C1I8137
VBV ENV-1335

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
JILLIAN BARNETT	JULY 7/21	4pm		21/07/07	1610	

Laboratory Use Only
Time Sensitive | Temperature (°C) on Recei: 6.7 | 7.4 | Custody Seal Present / Intact: Yes ✓ | No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVLABS.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST. E, MISSISSAUGA
Your C.O.C. #: 818503-02-01

Attention: Samuel Lee

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/07/15
Report #: R6720922
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1I8144
Received: 2021/07/07, 16:10

Sample Matrix: Soil
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	4	N/A	2021/07/12	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	1	N/A	2021/07/15	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	4	2021/07/12	2021/07/12	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	1	2021/07/15	2021/07/15	CAM SOP-00408	R153 Ana. Prot. 2011
Conductivity	3	2021/07/12	2021/07/12	CAM SOP-00414	OMOE E3530 v1 m
Conductivity	1	2021/07/15	2021/07/15	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	1	2021/07/15	2021/07/15	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	4	2021/07/09	2021/07/12	CAM SOP-00436	EPA 3060/7199 m
Acid Extractable Metals by ICPMS	4	2021/07/12	2021/07/12	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	1	2021/07/15	2021/07/15	CAM SOP-00447	EPA 6020B m
Moisture	1	N/A	2021/07/14	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	4	N/A	2021/07/08	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2021/07/14	2021/07/15	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	4	2021/07/09	2021/07/10	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2021/07/12	2021/07/12	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	1	2021/07/09	2021/07/09	CAM SOP-00413	EPA 9045 D m
Sieve, 75um	1	N/A	2021/07/12	CAM SOP-00467	ASTM D1140 -17 m
Sodium Adsorption Ratio (SAR)	3	N/A	2021/07/12	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR)	1	N/A	2021/07/15	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report.

Your Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST. E, MISSISSAUGA
Your C.O.C. #: 818503-02-01

Attention: Samuel Lee

exp Services Inc
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/07/15
Report #: R6720922
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BV LABS JOB #: C1I8144
Received: 2021/07/07, 16:10

Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Patricia Legette, Project Manager
Email: Patricia.Legette@bureauveritas.com
Phone# (905)817-5799
==========
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1I8144
Report Date: 2021/07/15

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST. E, MISSISSAUGA
Sampler Initials: JB

O.REG 153 METALS PACKAGE (SOIL)

BV Labs ID		QAO297		QAO298	QAO299	QAO300	QAO301		
Sampling Date		2021/07/04		2021/07/04	2021/07/04	2021/07/04	2021/07/04		
COC Number		818503-02-01		818503-02-01	818503-02-01	818503-02-01	818503-02-01		
	UNITS	**BH3 SS2**	**QC Batch**	**BH4 SS1/SS2**	**BH8 SS1/SS2**	**BH9 SS1/SS2**	**BH99 SS1/SS2**	**RDL**	**QC Batch**
Inorganics									
Chromium (VI)	ug/g	<0.18	7463855	<0.18	<0.18	<0.18	<0.18	0.18	7453214
Metals									
Hot Water Ext. Boron (B)	ug/g	0.098	7464304	0.26	0.13	0.070	0.095	0.050	7456717
Acid Extractable Antimony (Sb)	ug/g	<0.20	7464295	<0.20	<0.20	<0.20	<0.20	0.20	7456607
Acid Extractable Arsenic (As)	ug/g	3.3	7464295	5.5	1.8	2.4	2.5	1.0	7456607
Acid Extractable Barium (Ba)	ug/g	72	7464295	91	27	48	29	0.50	7456607
Acid Extractable Beryllium (Be)	ug/g	0.56	7464295	0.88	0.26	0.39	0.30	0.20	7456607
Acid Extractable Boron (B)	ug/g	6.6	7464295	9.1	<5.0	<5.0	<5.0	5.0	7456607
Acid Extractable Cadmium (Cd)	ug/g	<0.10	7464295	0.11	<0.10	<0.10	<0.10	0.10	7456607
Acid Extractable Chromium (Cr)	ug/g	19	7464295	24	8.6	13	10	1.0	7456607
Acid Extractable Cobalt (Co)	ug/g	9.6	7464295	15	4.2	6.5	4.5	0.10	7456607
Acid Extractable Copper (Cu)	ug/g	20	7464295	29	8.6	14	10	0.50	7456607
Acid Extractable Lead (Pb)	ug/g	7.1	7464295	12	5.4	6.6	5.6	1.0	7456607
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	7464295	<0.50	<0.50	<0.50	<0.50	0.50	7456607
Acid Extractable Nickel (Ni)	ug/g	21	7464295	32	8.2	13	9.1	0.50	7456607
Acid Extractable Selenium (Se)	ug/g	<0.50	7464295	<0.50	<0.50	<0.50	<0.50	0.50	7456607
Acid Extractable Silver (Ag)	ug/g	<0.20	7464295	<0.20	<0.20	<0.20	<0.20	0.20	7456607
Acid Extractable Thallium (Tl)	ug/g	0.12	7464295	0.14	<0.050	0.086	0.061	0.050	7456607
Acid Extractable Uranium (U)	ug/g	0.40	7464295	0.48	0.36	0.37	0.34	0.050	7456607
Acid Extractable Vanadium (V)	ug/g	29	7464295	34	17	21	19	5.0	7456607
Acid Extractable Zinc (Zn)	ug/g	47	7464295	73	18	33	23	5.0	7456607
Acid Extractable Mercury (Hg)	ug/g	<0.050	7464295	<0.050	<0.050	<0.050	<0.050	0.050	7456607

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1I8144
Report Date: 2021/07/15

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST. E, MISSISSAUGA
Sampler Initials: JB

O.REG 153 PAHS (SOIL)

BV Labs ID		QAO297		QAO298	QAO299	QAO300	QAO301		
Sampling Date		2021/07/04		2021/07/04	2021/07/04	2021/07/04	2021/07/04		
COC Number		818503-02-01		818503-02-01	818503-02-01	818503-02-01	818503-02-01		
	UNITS	**BH3 SS2**	**QC Batch**	**BH4 SS1/SS2**	**BH8 SS1/SS2**	**BH9 SS1/SS2**	**BH99 SS1/SS2**	**RDL**	**QC Batch**
Inorganics									
Moisture	%	17	7463384	13	17	16	15	1.0	7451526
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	7462590	<0.0071	<0.0071	<0.0071	<0.0071	0.0071	7450800
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Acenaphthylene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Anthracene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Benzo(a)anthracene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Benzo(a)pyrene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Benzo(b/j)fluoranthene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Benzo(g,h,i)perylene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Benzo(k)fluoranthene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Chrysene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Dibenzo(a,h)anthracene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Fluoranthene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Fluorene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
1-Methylnaphthalene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
2-Methylnaphthalene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Naphthalene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Phenanthrene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Pyrene	ug/g	<0.0050	7463511	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7454035
Surrogate Recovery (%)									
D10-Anthracene	%	82	7463511	87	88	87	87		7454035
D14-Terphenyl (FS)	%	83	7463511	89	91	90	89		7454035
D8-Acenaphthylene	%	77	7463511	82	78	83	81		7454035

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1I8144
Report Date: 2021/07/15

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST. E, MISSISSAUGA
Sampler Initials: JB

SODIUM ADSORPTION RATIO (SAR)

BV Labs ID		QAO297		QAO298		QAO299	QAO300	
Sampling Date		2021/07/04		2021/07/04		2021/07/04	2021/07/04	
COC Number		818503-02-01		818503-02-01		818503-02-01	818503-02-01	
	UNITS	**BH3 SS2**	**QC Batch**	**BH4 SS1/SS2**	**QC Batch**	**BH8 SS1/SS2**	**BH9 SS1/SS2**	**QC Batch**
Calculated Parameters								
Sodium Adsorption Ratio	N/A	2.3	7461710	3.2	7450802	13	3.9	7450813
QC Batch = Quality Control Batch								

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BV Labs Job #: C1I8144
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Sampler Initials: JB

RESULTS OF ANALYSES OF SOIL

BV Labs ID		QAO296		QAO296			QAO297		
Sampling Date		2021/07/04		2021/07/04			2021/07/04		
COC Number		818503-02-01		818503-02-01			818503-02-01		
	UNITS	**BH2 SS3**	**QC Batch**	**BH2 SS3 Lab-Dup**	**RDL**	**QC Batch**	**BH3 SS2**	**RDL**	**QC Batch**
Inorganics									
Conductivity	mS/cm						0.28	0.002	7464175
Available (CaCl2) pH	pH	7.89	7453245				7.74		7456847
Miscellaneous Parameters									
Grain Size	%	FINE	7455845	FINE	N/A	7455845			
Sieve - #200 (<0.075mm)	%	98	7455845	98	1	7455845			
Sieve - #200 (>0.075mm)	%	2	7455845	2	1	7455845			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
N/A = Not Applicable

BV Labs ID		QAO297		QAO298	QAO299	QAO300		
Sampling Date		2021/07/04		2021/07/04	2021/07/04	2021/07/04		
COC Number		818503-02-01		818503-02-01	818503-02-01	818503-02-01		
	UNITS	**BH3 SS2 Lab-Dup**	**QC Batch**	**BH4 SS1/SS2**	**BH8 SS1/SS2**	**BH9 SS1/SS2**	**RDL**	**QC Batch**
Inorganics								
Conductivity	mS/cm	0.27	7464175	0.45	0.65	0.59	0.002	7456870

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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BV Labs Job #: C1I8144
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Sampler Initials: JB

TEST SUMMARY

BV Labs ID: QAO296
Sample ID: BH2 SS3
Matrix: Soil

Collected: 2021/07/04
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	7453245	2021/07/09	2021/07/09	Surinder Rai
Sieve, 75um	SIEV	7455845	N/A	2021/07/12	Gurpreet Kaur (ONT)

BV Labs ID: QAO296 Dup
Sample ID: BH2 SS3
Matrix: Soil

Collected: 2021/07/04
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sieve, 75um	SIEV	7455845	N/A	2021/07/12	Gurpreet Kaur (ONT)

BV Labs ID: QAO297
Sample ID: BH3 SS2
Matrix: Soil

Collected: 2021/07/04
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7462590	N/A	2021/07/15	Automated Statchk
Hot Water Extractable Boron	ICP	7464304	2021/07/15	2021/07/15	Medhat Nasr
Conductivity	AT	7464175	2021/07/15	2021/07/15	Massarat Jan
Hexavalent Chromium in Soil by IC	IC/SPEC	7463855	2021/07/15	2021/07/15	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7464295	2021/07/15	2021/07/15	Prempal Bhatti
Moisture	BAL	7463384	N/A	2021/07/14	Prgya Panchal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7463511	2021/07/14	2021/07/15	Jonghan Yoon
pH CaCl2 EXTRACT	AT	7456847	2021/07/12	2021/07/12	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7461710	N/A	2021/07/15	Automated Statchk

BV Labs ID: QAO297 Dup
Sample ID: BH3 SS2
Matrix: Soil

Collected: 2021/07/04
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	7464175	2021/07/15	2021/07/15	Massarat Jan

BV Labs ID: QAO298
Sample ID: BH4 SS1/SS2
Matrix: Soil

Collected: 2021/07/04
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7450800	N/A	2021/07/12	Automated Statchk
Hot Water Extractable Boron	ICP	7456717	2021/07/12	2021/07/12	Meghaben Patel
Conductivity	AT	7456870	2021/07/12	2021/07/12	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7453214	2021/07/09	2021/07/12	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7456607	2021/07/12	2021/07/12	Viviana Canzonieri
Moisture	BAL	7451526	N/A	2021/07/08	Prgya Panchal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7454035	2021/07/09	2021/07/10	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	7450802	N/A	2021/07/12	Automated Statchk

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TEST SUMMARY

BV Labs ID: QAO299
Sample ID: BH8 SS1/SS2
Matrix: Soil

Collected: 2021/07/04
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7450800	N/A	2021/07/12	Automated Statchk
Hot Water Extractable Boron	ICP	7456717	2021/07/12	2021/07/12	Meghaben Patel
Conductivity	AT	7456870	2021/07/12	2021/07/12	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7453214	2021/07/09	2021/07/12	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7456607	2021/07/12	2021/07/12	Viviana Canzonieri
Moisture	BAL	7451526	N/A	2021/07/08	Prgya Panchal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7454035	2021/07/09	2021/07/10	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	7450813	N/A	2021/07/12	Automated Statchk

BV Labs ID: QAO300
Sample ID: BH9 SS1/SS2
Matrix: Soil

Collected: 2021/07/04
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7450800	N/A	2021/07/12	Automated Statchk
Hot Water Extractable Boron	ICP	7456717	2021/07/12	2021/07/12	Meghaben Patel
Conductivity	AT	7456870	2021/07/12	2021/07/12	Neil Dassanayake
Hexavalent Chromium in Soil by IC	IC/SPEC	7453214	2021/07/09	2021/07/12	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7456607	2021/07/12	2021/07/12	Viviana Canzonieri
Moisture	BAL	7451526	N/A	2021/07/08	Prgya Panchal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7454035	2021/07/09	2021/07/10	Jonghan Yoon
Sodium Adsorption Ratio (SAR)	CALC/MET	7450813	N/A	2021/07/12	Automated Statchk

BV Labs ID: QAO301
Sample ID: BH99 SS1/SS2
Matrix: Soil

Collected: 2021/07/04
Shipped:
Received: 2021/07/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7450800	N/A	2021/07/12	Automated Statchk
Hot Water Extractable Boron	ICP	7456717	2021/07/12	2021/07/12	Meghaben Patel
Hexavalent Chromium in Soil by IC	IC/SPEC	7453214	2021/07/09	2021/07/12	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7456607	2021/07/12	2021/07/12	Viviana Canzonieri
Moisture	BAL	7451526	N/A	2021/07/08	Prgya Panchal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7454035	2021/07/09	2021/07/10	Jonghan Yoon

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C

Revised Report (2021/07/15): Additional analysis added

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST. E, MISSISSAUGA
Sampler Initials: JB

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7454035	D10-Anthracene	2021/07/09	83	50 - 130	86	50 - 130	87	%				
7454035	D14-Terphenyl (FS)	2021/07/09	86	50 - 130	87	50 - 130	87	%				
7454035	D8-Acenaphthylene	2021/07/09	78	50 - 130	84	50 - 130	82	%				
7463511	D10-Anthracene	2021/07/15	82	50 - 130	82	50 - 130	83	%				
7463511	D14-Terphenyl (FS)	2021/07/15	84	50 - 130	82	50 - 130	81	%				
7463511	D8-Acenaphthylene	2021/07/15	78	50 - 130	80	50 - 130	77	%				
7451526	Moisture	2021/07/08							0	20		
7453214	Chromium (VI)	2021/07/12	90	70 - 130	92	80 - 120	<0.18	ug/g	NC	35		
7453245	Available (CaCl2) pH	2021/07/09			101	97 - 103			0.36	N/A		
7454035	1-Methylnaphthalene	2021/07/10	78	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40		
7454035	2-Methylnaphthalene	2021/07/10	75	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40		
7454035	Acenaphthene	2021/07/10	82	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40		
7454035	Acenaphthylene	2021/07/10	73	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40		
7454035	Anthracene	2021/07/10	83	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40		
7454035	Benzo(a)anthracene	2021/07/10	94	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40		
7454035	Benzo(a)pyrene	2021/07/10	82	50 - 130	87	50 - 130	<0.0050	ug/g	NC	40		
7454035	Benzo(b/j)fluoranthene	2021/07/10	90	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
7454035	Benzo(g,h,i)perylene	2021/07/10	88	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40		
7454035	Benzo(k)fluoranthene	2021/07/10	103	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40		
7454035	Chrysene	2021/07/10	95	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40		
7454035	Dibenzo(a,h)anthracene	2021/07/10	90	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40		
7454035	Fluoranthene	2021/07/10	90	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40		
7454035	Fluorene	2021/07/10	89	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40		
7454035	Indeno(1,2,3-cd)pyrene	2021/07/10	88	50 - 130	89	50 - 130	<0.0050	ug/g	NC	40		
7454035	Naphthalene	2021/07/10	57	50 - 130	85	50 - 130	<0.0050	ug/g	NC	40		
7454035	Phenanthrene	2021/07/10	90	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40		
7454035	Pyrene	2021/07/10	91	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40		
7455845	Sieve - #200 (<0.075mm)	2021/07/12							0.20	20	55	53 - 58
7455845	Sieve - #200 (>0.075mm)	2021/07/12							10	20	45	42 - 47
7456607	Acid Extractable Antimony (Sb)	2021/07/12	93	75 - 125	96	80 - 120	<0.20	ug/g	NC	30		
7456607	Acid Extractable Arsenic (As)	2021/07/12	93	75 - 125	95	80 - 120	<1.0	ug/g	6.6	30		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7456607	Acid Extractable Barium (Ba)	2021/07/12	NC	75 - 125	98	80 - 120	<0.50	ug/g	1.8	30		
7456607	Acid Extractable Beryllium (Be)	2021/07/12	97	75 - 125	99	80 - 120	<0.20	ug/g	6.3	30		
7456607	Acid Extractable Boron (B)	2021/07/12	96	75 - 125	99	80 - 120	<5.0	ug/g	1.1	30		
7456607	Acid Extractable Cadmium (Cd)	2021/07/12	94	75 - 125	96	80 - 120	<0.10	ug/g	NC	30		
7456607	Acid Extractable Chromium (Cr)	2021/07/12	96	75 - 125	96	80 - 120	<1.0	ug/g	0.69	30		
7456607	Acid Extractable Cobalt (Co)	2021/07/12	95	75 - 125	97	80 - 120	<0.10	ug/g	2.2	30		
7456607	Acid Extractable Copper (Cu)	2021/07/12	93	75 - 125	93	80 - 120	<0.50	ug/g	4.1	30		
7456607	Acid Extractable Lead (Pb)	2021/07/12	95	75 - 125	100	80 - 120	<1.0	ug/g	3.7	30		
7456607	Acid Extractable Mercury (Hg)	2021/07/12	89	75 - 125	100	80 - 120	<0.050	ug/g	NC	30		
7456607	Acid Extractable Molybdenum (Mo)	2021/07/12	98	75 - 125	98	80 - 120	<0.50	ug/g	NC	30		
7456607	Acid Extractable Nickel (Ni)	2021/07/12	93	75 - 125	93	80 - 120	<0.50	ug/g	4.1	30		
7456607	Acid Extractable Selenium (Se)	2021/07/12	98	75 - 125	101	80 - 120	<0.50	ug/g	NC	30		
7456607	Acid Extractable Silver (Ag)	2021/07/12	93	75 - 125	95	80 - 120	<0.20	ug/g	NC	30		
7456607	Acid Extractable Thallium (Tl)	2021/07/12	92	75 - 125	97	80 - 120	<0.050	ug/g	8.3	30		
7456607	Acid Extractable Uranium (U)	2021/07/12	99	75 - 125	102	80 - 120	<0.050	ug/g	2.2	30		
7456607	Acid Extractable Vanadium (V)	2021/07/12	100	75 - 125	96	80 - 120	<5.0	ug/g	0.51	30		
7456607	Acid Extractable Zinc (Zn)	2021/07/12	94	75 - 125	99	80 - 120	<5.0	ug/g	6.1	30		
7456717	Hot Water Ext. Boron (B)	2021/07/12	95	75 - 125	95	75 - 125	<0.050	ug/g	5.5	40		
7456847	Available (CaCl2) pH	2021/07/12			100	97 - 103			0.17	N/A		
7456870	Conductivity	2021/07/12			101	90 - 110	<0.002	mS/cm	2.2	10		
7463384	Moisture	2021/07/14							0.35	20		
7463511	1-Methylnaphthalene	2021/07/15	90	50 - 130	94	50 - 130	<0.0050	ug/g	16	40		
7463511	2-Methylnaphthalene	2021/07/15	88	50 - 130	92	50 - 130	<0.0050	ug/g	11	40		
7463511	Acenaphthene	2021/07/15	83	50 - 130	88	50 - 130	<0.0050	ug/g	9.1	40		
7463511	Acenaphthylene	2021/07/15	72	50 - 130	81	50 - 130	<0.0050	ug/g	23	40		
7463511	Anthracene	2021/07/15	75	50 - 130	83	50 - 130	<0.0050	ug/g	0.34	40		
7463511	Benzo(a)anthracene	2021/07/15	NC	50 - 130	90	50 - 130	<0.0050	ug/g	16	40		
7463511	Benzo(a)pyrene	2021/07/15	NC	50 - 130	79	50 - 130	<0.0050	ug/g	20	40		
7463511	Benzo(b/j)fluoranthene	2021/07/15	52	50 - 130	89	50 - 130	<0.0050	ug/g	19	40		
7463511	Benzo(g,h,i)perylene	2021/07/15	NC	50 - 130	72	50 - 130	<0.0050	ug/g	29	40		
7463511	Benzo(k)fluoranthene	2021/07/15	70	50 - 130	95	50 - 130	<0.0050	ug/g	18	40		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7463511	Chrysene	2021/07/15	NC	50 - 130	91	50 - 130	<0.0050	ug/g	15	40		
7463511	Dibenzo(a,h)anthracene	2021/07/15	79	50 - 130	74	50 - 130	<0.0050	ug/g	20	40		
7463511	Fluoranthene	2021/07/15	NC	50 - 130	87	50 - 130	<0.0050	ug/g	16	40		
7463511	Fluorene	2021/07/15	88	50 - 130	90	50 - 130	<0.0050	ug/g	9.3	40		
7463511	Indeno(1,2,3-cd)pyrene	2021/07/15	NC	50 - 130	73	50 - 130	<0.0050	ug/g	26	40		
7463511	Naphthalene	2021/07/15	74	50 - 130	80	50 - 130	<0.0050	ug/g	15	40		
7463511	Phenanthrene	2021/07/15	57	50 - 130	89	50 - 130	<0.0050	ug/g	23	40		
7463511	Pyrene	2021/07/15	NC	50 - 130	88	50 - 130	<0.0050	ug/g	15	40		
7463855	Chromium (VI)	2021/07/15	75	70 - 130	96	80 - 120	<0.18	ug/g	NC	35		
7464175	Conductivity	2021/07/15			100	90 - 110	<0.002	mS/cm	0.73	10		
7464295	Acid Extractable Antimony (Sb)	2021/07/15	87	75 - 125	101	80 - 120	<0.20	ug/g	NC	30		
7464295	Acid Extractable Arsenic (As)	2021/07/15	98	75 - 125	97	80 - 120	<1.0	ug/g	2.7	30		
7464295	Acid Extractable Barium (Ba)	2021/07/15	NC	75 - 125	97	80 - 120	<0.50	ug/g	0.92	30		
7464295	Acid Extractable Beryllium (Be)	2021/07/15	102	75 - 125	100	80 - 120	<0.20	ug/g	1.5	30		
7464295	Acid Extractable Boron (B)	2021/07/15	92	75 - 125	99	80 - 120	<5.0	ug/g	2.0	30		
7464295	Acid Extractable Cadmium (Cd)	2021/07/15	99	75 - 125	96	80 - 120	<0.10	ug/g	5.2	30		
7464295	Acid Extractable Chromium (Cr)	2021/07/15	NC	75 - 125	93	80 - 120	<1.0	ug/g	1.5	30		
7464295	Acid Extractable Cobalt (Co)	2021/07/15	99	75 - 125	97	80 - 120	<0.10	ug/g	1.3	30		
7464295	Acid Extractable Copper (Cu)	2021/07/15	103	75 - 125	95	80 - 120	<0.50	ug/g	1.2	30		
7464295	Acid Extractable Lead (Pb)	2021/07/15	102	75 - 125	97	80 - 120	<1.0	ug/g	1.8	30		
7464295	Acid Extractable Mercury (Hg)	2021/07/15	93	75 - 125	96	80 - 120	<0.050	ug/g	NC	30		
7464295	Acid Extractable Molybdenum (Mo)	2021/07/15	97	75 - 125	97	80 - 120	<0.50	ug/g	NC	30		
7464295	Acid Extractable Nickel (Ni)	2021/07/15	NC	75 - 125	99	80 - 120	<0.50	ug/g	0.35	30		
7464295	Acid Extractable Selenium (Se)	2021/07/15	98	75 - 125	98	80 - 120	<0.50	ug/g	NC	30		
7464295	Acid Extractable Silver (Ag)	2021/07/15	97	75 - 125	95	80 - 120	<0.20	ug/g	NC	30		
7464295	Acid Extractable Thallium (Tl)	2021/07/15	99	75 - 125	99	80 - 120	<0.050	ug/g	6.0	30		
7464295	Acid Extractable Uranium (U)	2021/07/15	102	75 - 125	99	80 - 120	<0.050	ug/g	6.6	30		
7464295	Acid Extractable Vanadium (V)	2021/07/15	NC	75 - 125	95	80 - 120	<5.0	ug/g	1.6	30		
7464295	Acid Extractable Zinc (Zn)	2021/07/15	NC	75 - 125	98	80 - 120	<5.0	ug/g	1.4	30		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
7464304	Hot Water Ext. Boron (B)	2021/07/15	98	75 - 125	101	75 - 125	<0.050	ug/g	2.7	40		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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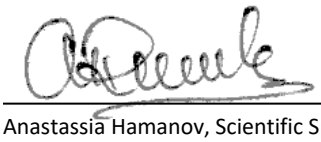
BV Labs Job #: C1I8144
Report Date: 2021/07/15

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST. E, MISSISSAUGA
Sampler Initials: JB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist

Brad Newman, B.Sc., C.Chem., Scientific Service Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

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Page 1 of 1

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#9590 exp Services Inc	Company Name:		Quotation #:	~~B91716~~ STREAM 1	BV Labs Job #:	Bottle Order #:
Attention:	Central Services	Attention:	~~Trevor Anthony~~	P.O. #:			818503
Address:	1595 Clark Blvd	Address:	SAMUEL.LEE@EXP.COM	Project:	~~BRM-21004878-A0~~	COC #:	Project Manager:
	Brampton ON L6T 4V1			Project Name:	BRM-00239423-E0	C#818503-02-01	Christine Gripton
Tel:	(905) 793-9800 Fax: (905) 793-0641	Tel:	Fax:	Site #:			
Email:	AP@exp.com; Karen.Burke@exp.com	Email:	~~Trevor.Anthony@exp.com~~	Sampled By:			

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BV LABS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☒ Res/Park ☒ Medium/Fine	☐ CCME ☐ Sanitary Sewer Bylaw	
☒ Table 2 ☐ Ind/Comm ☐ Coarse	☐ Reg 558 ☐ Storm Sewer Bylaw	
☐ Table 3 ☐ Agri/Other ☒ For RSC	☐ MISA Municipality ____	
☐ Table ____	☐ PWQO ☐ Reg 406 Table ____	
	☐ Other ____	

Include Criteria on Certificate of Analysis (Y/N)? ____

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ____ Time Required: ____ ☐
Rush Confirmation Number: ____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	ANALYSIS REQUESTED (PLEASE BE SPECIFIC): PHCs, BTEX/F1-F4	VOCs by HS	Metals & Inorganics Pkg	PH	Grain size	O Reg metal Package	EC/SAR	PAHs			# of Bottles	Comments
1		BH2 SS3	JULY 2021	AM	GW S					X	X						1	
2		BH3 SS2	↓	↓	GW					X		X	X	X			2	
3		BH4 SS1/SS2			GW							X	X	X			1	
4		BH8 SS1/SS2			GW							X	X	X			1	
5		BH9 SS1/SS2			GW							X	X	X			1	
6		BH99 SS1/SS2			GW							X		X			1	
7					GW													
8					GW													
9					GW													
10					GW													

07-Jul-21 16:10
Christine Gripton
C118144
VBV ENV 1081

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
JILIAN BARNETT	July 7/21	4pm		2021 07 07	16:10		Time Sensitive	Temperature (°C) on Recei 6.1 7.4	Custody Seal Present	Yes ✓	No
									Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVLABS.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS. *

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST.
Your C.O.C. #: 165578

Attention: Samuel Lee

exp Services Inc
Brampton Branch
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/07/19
Report #: R6726530
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1J5051
Received: 2021/07/14, 11:22

Sample Matrix: Soil
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	1	N/A	2021/07/17	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	1	2021/07/17	2021/07/19	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	1	2021/07/15	2021/07/16	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2021/07/19	2021/07/19	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	1	2021/07/15	2021/07/16	CAM SOP-00436	EPA 3060/7199 m
Acid Extractable Metals by ICPMS	1	2021/07/16	2021/07/17	CAM SOP-00447	EPA 6020B m
Moisture	2	N/A	2021/07/15	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2021/07/16	2021/07/17	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	1	2021/07/16	2021/07/16	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2021/07/19	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

Your Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST.
Your C.O.C. #: 165578

Attention: Samuel Lee

exp Services Inc
Brampton Branch
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/07/19
Report #: R6726530
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1J5051
Received: 2021/07/14, 11:22

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Patricia Legette, Project Manager
Email: Patricia.Legette@bureauveritas.com
Phone# (905)817-5799

==========

This report has been generated and distributed using a secure automated process.
BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

BV Labs Job #: C1J5051
Report Date: 2021/07/19

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST.
Sampler Initials: BH

O.REG 153 METALS & INORGANICS PKG (SOIL)

BV Labs ID		QCA123			QCA123		
Sampling Date		2021/07/08			2021/07/08		
COC Number		165578			165578		
	UNITS	**BH10 SS3**	**RDL**	**QC Batch**	**BH10 SS3 Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters							
Sodium Adsorption Ratio	N/A	1.5		7461710			
Inorganics							
Conductivity	mS/cm	0.26	0.002	7469634			
Moisture	%	19	1.0	7464643	19	1.0	7464643
Available (CaCl2) pH	pH	7.60		7466388			
WAD Cyanide (Free)	ug/g	<0.01	0.01	7464750			
Chromium (VI)	ug/g	<0.18	0.18	7464726			
Metals							
Hot Water Ext. Boron (B)	ug/g	0.064	0.050	7468734			
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	7467108			
Acid Extractable Arsenic (As)	ug/g	1.4	1.0	7467108			
Acid Extractable Barium (Ba)	ug/g	20	0.50	7467108			
Acid Extractable Beryllium (Be)	ug/g	0.23	0.20	7467108			
Acid Extractable Boron (B)	ug/g	<5.0	5.0	7467108			
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	7467108			
Acid Extractable Chromium (Cr)	ug/g	8.0	1.0	7467108			
Acid Extractable Cobalt (Co)	ug/g	3.9	0.10	7467108			
Acid Extractable Copper (Cu)	ug/g	8.7	0.50	7467108			
Acid Extractable Lead (Pb)	ug/g	3.0	1.0	7467108			
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	7467108			
Acid Extractable Nickel (Ni)	ug/g	7.0	0.50	7467108			
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	7467108			
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	7467108			
Acid Extractable Thallium (Tl)	ug/g	<0.050	0.050	7467108			
Acid Extractable Uranium (U)	ug/g	0.28	0.050	7467108			
Acid Extractable Vanadium (V)	ug/g	16	5.0	7467108			
Acid Extractable Zinc (Zn)	ug/g	16	5.0	7467108			
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	7467108			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 PAHS (SOIL)

BV Labs ID		QCA122		
Sampling Date		2021/07/08		
COC Number		165578		
	UNITS	**BH10 SS2**	**RDL**	**QC Batch**
Inorganics				
Moisture	%	12	1.0	7464278
Calculated Parameters				
Methylnaphthalene, 2-(1-)	ug/g	0.013	0.0071	7461436
Polyaromatic Hydrocarbons				
Acenaphthene	ug/g	<0.0050	0.0050	7468142
Acenaphthylene	ug/g	<0.0050	0.0050	7468142
Anthracene	ug/g	<0.0050	0.0050	7468142
Benzo(a)anthracene	ug/g	<0.0050	0.0050	7468142
Benzo(a)pyrene	ug/g	<0.0050	0.0050	7468142
Benzo(b/j)fluoranthene	ug/g	0.0062	0.0050	7468142
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	7468142
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	7468142
Chrysene	ug/g	<0.0050	0.0050	7468142
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	7468142
Fluoranthene	ug/g	0.0066	0.0050	7468142
Fluorene	ug/g	<0.0050	0.0050	7468142
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	7468142
1-Methylnaphthalene	ug/g	0.0068	0.0050	7468142
2-Methylnaphthalene	ug/g	0.0060	0.0050	7468142
Naphthalene	ug/g	<0.0050	0.0050	7468142
Phenanthrene	ug/g	0.0063	0.0050	7468142
Pyrene	ug/g	0.0061	0.0050	7468142
Surrogate Recovery (%)				
D10-Anthracene	%	92		7468142
D14-Terphenyl (FS)	%	109		7468142
D8-Acenaphthylene	%	90		7468142

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: C1J5051
Report Date: 2021/07/19

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST.
Sampler Initials: BH

TEST SUMMARY

BV Labs ID: QCA122
Sample ID: BH10 SS2
Matrix: Soil

Collected: 2021/07/08
Shipped:
Received: 2021/07/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	7461436	N/A	2021/07/17	Automated Statchk
Moisture	BAL	7464278	N/A	2021/07/15	Prgya Panchal
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	7468142	2021/07/16	2021/07/17	Jonghan Yoon

BV Labs ID: QCA123
Sample ID: BH10 SS3
Matrix: Soil

Collected: 2021/07/08
Shipped:
Received: 2021/07/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	7468734	2021/07/17	2021/07/19	Jolly John
Free (WAD) Cyanide	TECH	7464750	2021/07/15	2021/07/16	Louise Harding
Conductivity	AT	7469634	2021/07/19	2021/07/19	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	7464726	2021/07/15	2021/07/16	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	7467108	2021/07/16	2021/07/17	Viviana Canzonieri
Moisture	BAL	7464643	N/A	2021/07/15	Prgya Panchal
pH CaCl2 EXTRACT	AT	7466388	2021/07/16	2021/07/16	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	7461710	N/A	2021/07/19	Automated Statchk

BV Labs ID: QCA123 Dup
Sample ID: BH10 SS3
Matrix: Soil

Collected: 2021/07/08
Shipped:
Received: 2021/07/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	7464643	N/A	2021/07/15	Prgya Panchal

Bureau Veritas Laboratories 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

BV Labs Job #: C1J5051
Report Date: 2021/07/19

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST.
Sampler Initials: BH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C

Results relate only to the items tested.

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BV Labs Job #: C1J5051
Report Date: 2021/07/19

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST.
Sampler Initials: BH

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7468142	D10-Anthracene	2021/07/17	89	50 - 130	90	50 - 130	91	%		
7468142	D14-Terphenyl (FS)	2021/07/17	106	50 - 130	103	50 - 130	104	%		
7468142	D8-Acenaphthylene	2021/07/17	82	50 - 130	82	50 - 130	85	%		
7464278	Moisture	2021/07/15							2.7	20
7464643	Moisture	2021/07/15							2.1	20
7464726	Chromium (VI)	2021/07/16	77	70 - 130	93	80 - 120	<0.18	ug/g	NC	35
7464750	WAD Cyanide (Free)	2021/07/16	86	75 - 125	93	80 - 120	<0.01	ug/g	NC	35
7466388	Available (CaCl2) pH	2021/07/16			100	97 - 103			0.030	N/A
7467108	Acid Extractable Antimony (Sb)	2021/07/17	98	75 - 125	104	80 - 120	<0.20	ug/g	24	30
7467108	Acid Extractable Arsenic (As)	2021/07/17	96	75 - 125	101	80 - 120	<1.0	ug/g	0.0029	30
7467108	Acid Extractable Barium (Ba)	2021/07/17	NC	75 - 125	100	80 - 120	<0.50	ug/g	15	30
7467108	Acid Extractable Beryllium (Be)	2021/07/17	99	75 - 125	104	80 - 120	<0.20	ug/g	15	30
7467108	Acid Extractable Boron (B)	2021/07/17	96	75 - 125	103	80 - 120	<5.0	ug/g	NC	30
7467108	Acid Extractable Cadmium (Cd)	2021/07/17	97	75 - 125	101	80 - 120	<0.10	ug/g	24	30
7467108	Acid Extractable Chromium (Cr)	2021/07/17	97	75 - 125	99	80 - 120	<1.0	ug/g	7.0	30
7467108	Acid Extractable Cobalt (Co)	2021/07/17	96	75 - 125	101	80 - 120	<0.10	ug/g	6.2	30
7467108	Acid Extractable Copper (Cu)	2021/07/17	105	75 - 125	99	80 - 120	<0.50	ug/g	3.6	30
7467108	Acid Extractable Lead (Pb)	2021/07/17	NC	75 - 125	97	80 - 120	<1.0	ug/g	17	30
7467108	Acid Extractable Mercury (Hg)	2021/07/17	89	75 - 125	91	80 - 120	<0.050	ug/g	13	30
7467108	Acid Extractable Molybdenum (Mo)	2021/07/17	97	75 - 125	100	80 - 120	<0.50	ug/g	NC	30
7467108	Acid Extractable Nickel (Ni)	2021/07/17	101	75 - 125	103	80 - 120	<0.50	ug/g	6.4	30
7467108	Acid Extractable Selenium (Se)	2021/07/17	96	75 - 125	101	80 - 120	<0.50	ug/g	NC	30
7467108	Acid Extractable Silver (Ag)	2021/07/17	95	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
7467108	Acid Extractable Thallium (Tl)	2021/07/17	97	75 - 125	98	80 - 120	<0.050	ug/g	11	30
7467108	Acid Extractable Uranium (U)	2021/07/17	95	75 - 125	97	80 - 120	<0.050	ug/g	7.6	30
7467108	Acid Extractable Vanadium (V)	2021/07/17	102	75 - 125	99	80 - 120	<5.0	ug/g	10	30
7467108	Acid Extractable Zinc (Zn)	2021/07/17	NC	75 - 125	103	80 - 120	<5.0	ug/g	1.3	30
7468142	1-Methylnaphthalene	2021/07/17	96	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
7468142	2-Methylnaphthalene	2021/07/17	95	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
7468142	Acenaphthene	2021/07/17	90	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
7468142	Acenaphthylene	2021/07/17	87	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7468142	Anthracene	2021/07/17	90	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
7468142	Benzo(a)anthracene	2021/07/17	107	50 - 130	111	50 - 130	<0.0050	ug/g	NC	40
7468142	Benzo(a)pyrene	2021/07/17	91	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
7468142	Benzo(b/j)fluoranthene	2021/07/17	99	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40
7468142	Benzo(g,h,i)perylene	2021/07/17	88	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
7468142	Benzo(k)fluoranthene	2021/07/17	103	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
7468142	Chrysene	2021/07/17	96	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
7468142	Dibenzo(a,h)anthracene	2021/07/17	102	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
7468142	Fluoranthene	2021/07/17	110	50 - 130	115	50 - 130	<0.0050	ug/g	NC	40
7468142	Fluorene	2021/07/17	102	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40
7468142	Indeno(1,2,3-cd)pyrene	2021/07/17	96	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
7468142	Naphthalene	2021/07/17	78	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
7468142	Phenanthrene	2021/07/17	91	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
7468142	Pyrene	2021/07/17	105	50 - 130	109	50 - 130	<0.0050	ug/g	NC	40
7468734	Hot Water Ext. Boron (B)	2021/07/19	104	75 - 125	103	75 - 125	<0.050	ug/g	0.31	40
7469634	Conductivity	2021/07/19			99	90 - 110	<0.002	mS/cm	9.2	10

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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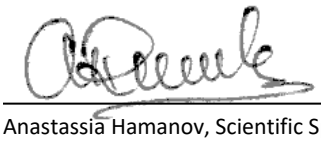
BV Labs Job #: C1J5051
Report Date: 2021/07/19

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN & HIGH ST.
Sampler Initials: BH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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BUREAU VERITAS

6740 Campobello Road, Mississauga, Ontario L5N 2L8
Phone: 905-817-5700 Fax: 905-817-5779 Toll Free: 800-563-6266
CAM FCD-01191/6

CHAIN OF CUSTODY RECORD 165578 Page 1 of 1

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: EXP	Company Name: EXP	Quotation #: STREAM 3	[X] Regular TAT (5-7 days) Most analyses
Contact Name: KAREN.BURKE@EXP.COM	Contact Name: SAMUEL LEE	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: AP@EXP.COM	Address: 1595 CLARK BLVD.	Project #: BRM-00239423-E0	Rush TAT (Surcharges will be applied)
Phone: Fax:	Phone: Fax:	Site Location: ANN & HIGH ST	[ ] 1 Day [ ] 2 Days [ ] 3-4 Days
Email:	Email: SAMUEL.LEE@EXP.COM	Site #:	Date Required:
MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS LABORATORIES' DRINKING WATER CHAIN OF CUSTODY		Site Location Province: ON Sampled By: BH	Rush Confirmation #:

Regulation 153

[ ] Table 1 [X] Res/Park [X] Med/ Fine
[X] Table 2 [ ] Ind/Comm [ ] Coarse
[ ] Table 3 [ ] Agri/ Other
[ ] Table ____
FOR RSC (PLEASE CIRCLE) Y / N

Other Regulations

[ ] CCME [ ] Sanitary Sewer Bylaw
[ ] MISA [ ] Storm Sewer Bylaw
[ ] PWQO Region ____
[ ] Other (Specify) ____
[ ] REG 558 (MIN. 3 DAY TAT REQUIRED)
[ ] REG 406 Table ____

Include Criteria on Certificate of Analysis: Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

Analysis Requested

	SAMPLE IDENTIFICATION	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	MATRIX	# OF CONTAINERS SUBMITTED	FIELD FILTERED (CIRCLE) Metals / Hg / CrVI	BTEX/ PHC F1	PHCs F2 - F4	VOCs	REG 153 METALS & INORGANICS	REG 153 ICPMS METALS	REG 153 METALS (Hg, Cr VI, ICPMS Metals, HWS - B)	PAH								HOLD- DO NOT ANALYZE
1	BH 10 SS2	July 8/21	AM	Soil	1								X								
2	BH 10 SS3	July 8/21	AM	Soil	1					+											
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N	N	4.1 4.5

COOLING MEDIA PRESENT: Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED-BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
JILIAN BARNETT	JULY 14/21	11:15		2021/14	1122

14-Jul-21 11:22
Patricia Legette
C1J5051

Unless otherwise agreed to in writing, work submitted on this Chain of Custody is subject to Bureau Veritas Laboratories' standard Terms and Conditions. Signing of this Chain of Custody document is acknowledgment and acceptanc and-conditions

COC-1004 (06/19)

ATM ENV-1231

White: BV Labs - Yellow: Client

Your Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Your C.O.C. #: 836582-01-01

Attention: Samuel Lee

exp Services Inc
Brampton Branch
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/07/22
Report #: R6731243
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1J9203
Received: 2021/07/16, 13:46

Sample Matrix: Ground Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
1,3-Dichloropropene Sum	4	N/A	2021/07/21		EPA 8260C m
Acid Extractables by GC/MS	2	2021/07/19	2021/07/20	CAM SOP-00332	EPA 8270 m
Chromium (VI) in Water	3	N/A	2021/07/20	CAM SOP-00436	EPA 7199 m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2021/07/20	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2021/07/20	2021/07/21	CAM SOP-00316	CCME PHC-CWS m
Mercury	3	2021/07/20	2021/07/20	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	3	N/A	2021/07/21	CAM SOP-00447	EPA 6020B m
Volatile Organic Compounds in Water	4	N/A	2021/07/20	CAM SOP-00228	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas Laboratories conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta

Your Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Your C.O.C. #: 836582-01-01

Attention: Samuel Lee

exp Services Inc
Brampton Branch
1595 Clark Blvd
Brampton, ON
CANADA L6T 4V1

Report Date: 2021/07/22
Report #: R6731243
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BV LABS JOB #: C1J9203

Received: 2021/07/16, 13:46

Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Patricia Legette, Project Manager
Email: Patricia.Legette@bureauveritas.com
Phone# (905)817-5799

==========

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BV Labs Job #: C1J9203
Report Date: 2021/07/22

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

O.REG 153 CHLOROPHENOLS (WATER)

BV Labs ID		QCV806	QCV809		
Sampling Date		2021/07/15	2021/07/16		
COC Number		836582-01-01	836582-01-01		
	UNITS	**MW1**	**MW5D**	**RDL**	**QC Batch**
Phenolics					
2-Chlorophenol	ug/L	<0.1	<0.1	0.1	7470729
2,4-Dichlorophenol	ug/L	<0.1	<0.1	0.1	7470729
2,4,6-Trichlorophenol	ug/L	<0.1	<0.1	0.1	7470729
Pentachlorophenol	ug/L	<0.1	<0.1	0.1	7470729
2,4,5-Trichlorophenol	ug/L	<0.1	<0.1	0.1	7470729
Surrogate Recovery (%)					
2,4,6-Tribromophenol	%	79	90		7470729
2-Fluorophenol	%	26 (1)	66		7470729
D5-Phenol	%	30	62		7470729

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) Surrogate recovery was below the lower control limit due to matrix interference. This may represent a lower bias in some results.

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BV Labs Job #: C1J9203
Report Date: 2021/07/22

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

O.REG 153 METALS PACKAGE (WATER)

BV Labs ID		QCV806	QCV807	QCV809		
Sampling Date		2021/07/15	2021/07/15	2021/07/16		
COC Number		836582-01-01	836582-01-01	836582-01-01		
	UNITS	**MW1**	**MW11**	**MW5D**	**RDL**	**QC Batch**
Metals						
Chromium (VI)	ug/L	<0.50	<0.50	<0.50	0.50	7472209
Mercury (Hg)	ug/L	<0.10	<0.10	<0.10	0.10	7472290
Dissolved Antimony (Sb)	ug/L	1.6	1.6	0.91	0.50	7470299
Dissolved Arsenic (As)	ug/L	1.7	1.7	1.3	1.0	7470299
Dissolved Barium (Ba)	ug/L	170	160	150	2.0	7470299
Dissolved Beryllium (Be)	ug/L	<0.40	<0.40	<0.40	0.40	7470299
Dissolved Boron (B)	ug/L	1800	2000	1400	10	7470299
Dissolved Cadmium (Cd)	ug/L	<0.090	<0.090	<0.090	0.090	7470299
Dissolved Chromium (Cr)	ug/L	<5.0	<5.0	<5.0	5.0	7470299
Dissolved Cobalt (Co)	ug/L	<0.50	<0.50	0.79	0.50	7470299
Dissolved Copper (Cu)	ug/L	<0.90	<0.90	<0.90	0.90	7470299
Dissolved Lead (Pb)	ug/L	<0.50	<0.50	<0.50	0.50	7470299
Dissolved Molybdenum (Mo)	ug/L	7.1	6.6	3.5	0.50	7470299
Dissolved Nickel (Ni)	ug/L	1.7	<1.0	1.5	1.0	7470299
Dissolved Selenium (Se)	ug/L	<2.0	<2.0	<2.0	2.0	7470299
Dissolved Silver (Ag)	ug/L	<0.090	<0.090	<0.090	0.090	7470299
Dissolved Sodium (Na)	ug/L	800000	820000	1300000	500	7470299
Dissolved Thallium (Tl)	ug/L	<0.050	<0.050	<0.050	0.050	7470299
Dissolved Uranium (U)	ug/L	1.7	1.6	2.5	0.10	7470299
Dissolved Vanadium (V)	ug/L	<0.50	<0.50	<0.50	0.50	7470299
Dissolved Zinc (Zn)	ug/L	<5.0	<5.0	<5.0	5.0	7470299

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1J9203
Report Date: 2021/07/22

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

O.REG 153 PHCS, BTEX/F1-F4 (GROUND WATER)

BV Labs ID		QCV808		
Sampling Date		2021/07/16		
COC Number		836582-01-01		
	UNITS	**MW35**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons				
Benzene	ug/L	<0.20	0.20	7471597
Toluene	ug/L	<0.20	0.20	7471597
Ethylbenzene	ug/L	<0.20	0.20	7471597
o-Xylene	ug/L	<0.20	0.20	7471597
p+m-Xylene	ug/L	<0.40	0.40	7471597
Total Xylenes	ug/L	<0.40	0.40	7471597
F1 (C6-C10)	ug/L	<25	25	7471597
F1 (C6-C10) - BTEX	ug/L	<25	25	7471597
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/L	<100	100	7473157
F3 (C16-C34 Hydrocarbons)	ug/L	<200	200	7473157
F4 (C34-C50 Hydrocarbons)	ug/L	<200	200	7473157
Reached Baseline at C50	ug/L	Yes		7473157
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	100		7471597
4-Bromofluorobenzene	%	95		7471597
D10-o-Xylene	%	109		7471597
D4-1,2-Dichloroethane	%	105		7471597
o-Terphenyl	%	90		7473157

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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BV Labs Job #: C1J9203
Report Date: 2021/07/22

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

O.REG 153 VOCS BY HS (WATER)

BV Labs ID		QCV806	QCV807	QCV809			QCV809		
Sampling Date		2021/07/15	2021/07/15	2021/07/16			2021/07/16		
COC Number		836582-01-01	836582-01-01	836582-01-01			836582-01-01		
	UNITS	**MW1**	**MW11**	**MW5D**	**RDL**	**QC Batch**	**MW5D Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	<0.50	<0.50	0.50	7468774			
Volatile Organics									
Acetone (2-Propanone)	ug/L	22	46	<10	10	7466780	<10	10	7466780
Benzene	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
Bromodichloromethane	ug/L	0.70	0.74	1.0	0.50	7466780	1.1	0.50	7466780
Bromoform	ug/L	<1.0	<1.0	<1.0	1.0	7466780	<1.0	1.0	7466780
Bromomethane	ug/L	<0.50	<0.50	<0.50	0.50	7466780	<0.50	0.50	7466780
Carbon Tetrachloride	ug/L	<0.19	<0.19	<0.19	0.19	7466780	<0.19	0.19	7466780
Chlorobenzene	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
Chloroform	ug/L	2.1	2.2	2.0	0.20	7466780	2.1	0.20	7466780
Dibromochloromethane	ug/L	<0.50	<0.50	0.61	0.50	7466780	0.63	0.50	7466780
1,2-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	0.40	7466780	<0.40	0.40	7466780
1,3-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	0.40	7466780	<0.40	0.40	7466780
1,4-Dichlorobenzene	ug/L	<0.40	<0.40	<0.40	0.40	7466780	<0.40	0.40	7466780
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	<1.0	<1.0	1.0	7466780	<1.0	1.0	7466780
1,1-Dichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
1,2-Dichloroethane	ug/L	<0.49	<0.49	<0.49	0.49	7466780	<0.49	0.49	7466780
1,1-Dichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
cis-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	7466780	<0.50	0.50	7466780
trans-1,2-Dichloroethylene	ug/L	<0.50	<0.50	<0.50	0.50	7466780	<0.50	0.50	7466780
1,2-Dichloropropane	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
cis-1,3-Dichloropropene	ug/L	<0.30	<0.30	<0.30	0.30	7466780	<0.30	0.30	7466780
trans-1,3-Dichloropropene	ug/L	<0.40	<0.40	<0.40	0.40	7466780	<0.40	0.40	7466780
Ethylbenzene	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
Ethylene Dibromide	ug/L	<0.19	<0.19	<0.19	0.19	7466780	<0.19	0.19	7466780
Hexane	ug/L	<1.0	<1.0	<1.0	1.0	7466780	<1.0	1.0	7466780
Methylene Chloride(Dichloromethane)	ug/L	<2.0	<2.0	<2.0	2.0	7466780	<2.0	2.0	7466780
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	<10	<10	10	7466780	<10	10	7466780
Methyl Isobutyl Ketone	ug/L	<5.0	<5.0	<5.0	5.0	7466780	<5.0	5.0	7466780
Methyl t-butyl ether (MTBE)	ug/L	<0.50	<0.50	<0.50	0.50	7466780	<0.50	0.50	7466780
Styrene	ug/L	<0.40	<0.40	<0.40	0.40	7466780	<0.40	0.40	7466780

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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BV Labs Job #: C1J9203
Report Date: 2021/07/22

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

O.REG 153 VOCS BY HS (WATER)

BV Labs ID		QCV806	QCV807	QCV809			QCV809		
Sampling Date		2021/07/15	2021/07/15	2021/07/16			2021/07/16		
COC Number		836582-01-01	836582-01-01	836582-01-01			836582-01-01		
	UNITS	**MW1**	**MW11**	**MW5D**	**RDL**	**QC Batch**	**MW5D Lab-Dup**	**RDL**	**QC Batch**
1,1,1,2-Tetrachloroethane	ug/L	<0.50	<0.50	<0.50	0.50	7466780	<0.50	0.50	7466780
1,1,2,2-Tetrachloroethane	ug/L	<0.40	<0.40	<0.40	0.40	7466780	<0.40	0.40	7466780
Tetrachloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
Toluene	ug/L	<0.20	0.21	<0.20	0.20	7466780	<0.20	0.20	7466780
1,1,1-Trichloroethane	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
1,1,2-Trichloroethane	ug/L	<0.40	<0.40	<0.40	0.40	7466780	<0.40	0.40	7466780
Trichloroethylene	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	<0.50	<0.50	0.50	7466780	<0.50	0.50	7466780
Vinyl Chloride	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
p+m-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
o-Xylene	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
Total Xylenes	ug/L	<0.20	<0.20	<0.20	0.20	7466780	<0.20	0.20	7466780
Surrogate Recovery (%)									
4-Bromofluorobenzene	%	95	102	100		7466780	99		7466780
D4-1,2-Dichloroethane	%	102	105	99		7466780	102		7466780
D8-Toluene	%	92	96	99		7466780	99		7466780

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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O.REG 153 VOCS BY HS (WATER)

BV Labs ID		QCV811		
Sampling Date		2021/07/16		
COC Number		836582-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters				
1,3-Dichloropropene (cis+trans)	ug/L	<0.50	0.50	7468774
Volatile Organics				
Acetone (2-Propanone)	ug/L	<10	10	7466780
Benzene	ug/L	<0.20	0.20	7466780
Bromodichloromethane	ug/L	<0.50	0.50	7466780
Bromoform	ug/L	<1.0	1.0	7466780
Bromomethane	ug/L	<0.50	0.50	7466780
Carbon Tetrachloride	ug/L	<0.19	0.19	7466780
Chlorobenzene	ug/L	<0.20	0.20	7466780
Chloroform	ug/L	<0.20	0.20	7466780
Dibromochloromethane	ug/L	<0.50	0.50	7466780
1,2-Dichlorobenzene	ug/L	<0.40	0.40	7466780
1,3-Dichlorobenzene	ug/L	<0.40	0.40	7466780
1,4-Dichlorobenzene	ug/L	<0.40	0.40	7466780
Dichlorodifluoromethane (FREON 12)	ug/L	<1.0	1.0	7466780
1,1-Dichloroethane	ug/L	<0.20	0.20	7466780
1,2-Dichloroethane	ug/L	<0.49	0.49	7466780
1,1-Dichloroethylene	ug/L	<0.20	0.20	7466780
cis-1,2-Dichloroethylene	ug/L	<0.50	0.50	7466780
trans-1,2-Dichloroethylene	ug/L	<0.50	0.50	7466780
1,2-Dichloropropane	ug/L	<0.20	0.20	7466780
cis-1,3-Dichloropropene	ug/L	<0.30	0.30	7466780
trans-1,3-Dichloropropene	ug/L	<0.40	0.40	7466780
Ethylbenzene	ug/L	<0.20	0.20	7466780
Ethylene Dibromide	ug/L	<0.19	0.19	7466780
Hexane	ug/L	<1.0	1.0	7466780
Methylene Chloride(Dichloromethane)	ug/L	<2.0	2.0	7466780
Methyl Ethyl Ketone (2-Butanone)	ug/L	<10	10	7466780
Methyl Isobutyl Ketone	ug/L	<5.0	5.0	7466780
Methyl t-butyl ether (MTBE)	ug/L	<0.50	0.50	7466780
Styrene	ug/L	<0.40	0.40	7466780
1,1,1,2-Tetrachloroethane	ug/L	<0.50	0.50	7466780

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

O.REG 153 VOCS BY HS (WATER)

BV Labs ID		QCV811		
Sampling Date		2021/07/16		
COC Number		836582-01-01		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
1,1,2,2-Tetrachloroethane	ug/L	<0.40	0.40	7466780
Tetrachloroethylene	ug/L	<0.20	0.20	7466780
Toluene	ug/L	<0.20	0.20	7466780
1,1,1-Trichloroethane	ug/L	<0.20	0.20	7466780
1,1,2-Trichloroethane	ug/L	<0.40	0.40	7466780
Trichloroethylene	ug/L	<0.20	0.20	7466780
Trichlorofluoromethane (FREON 11)	ug/L	<0.50	0.50	7466780
Vinyl Chloride	ug/L	<0.20	0.20	7466780
p+m-Xylene	ug/L	<0.20	0.20	7466780
o-Xylene	ug/L	<0.20	0.20	7466780
Total Xylenes	ug/L	<0.20	0.20	7466780
Surrogate Recovery (%)				
4-Bromofluorobenzene	%	100		7466780
D4-1,2-Dichloroethane	%	98		7466780
D8-Toluene	%	95		7466780

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

TEST SUMMARY

BV Labs ID: QCV806 **Collected:** 2021/07/15
Sample ID: MW1 **Shipped:**
Matrix: Ground Water **Received:** 2021/07/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7468774	N/A	2021/07/21	Automated Statchk
Acid Extractables by GC/MS	GC/MS	7470729	2021/07/19	2021/07/20	May Yin Mak
Chromium (VI) in Water	IC	7472209	N/A	2021/07/20	Lang Le
Mercury	CV/AA	7472290	2021/07/20	2021/07/20	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7470299	N/A	2021/07/21	Arefa Dabhad
Volatile Organic Compounds in Water	GC/MS	7466780	N/A	2021/07/20	Juan Pangilinan

BV Labs ID: QCV807 **Collected:** 2021/07/15
Sample ID: MW11 **Shipped:**
Matrix: Ground Water **Received:** 2021/07/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7468774	N/A	2021/07/21	Automated Statchk
Chromium (VI) in Water	IC	7472209	N/A	2021/07/20	Lang Le
Mercury	CV/AA	7472290	2021/07/20	2021/07/20	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7470299	N/A	2021/07/21	Arefa Dabhad
Volatile Organic Compounds in Water	GC/MS	7466780	N/A	2021/07/20	Juan Pangilinan

BV Labs ID: QCV808 **Collected:** 2021/07/16
Sample ID: MW35 **Shipped:**
Matrix: Ground Water **Received:** 2021/07/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	7471597	N/A	2021/07/20	Anca Ganea
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	7473157	2021/07/20	2021/07/21	Dennis Ngondu

BV Labs ID: QCV809 **Collected:** 2021/07/16
Sample ID: MW5D **Shipped:**
Matrix: Ground Water **Received:** 2021/07/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7468774	N/A	2021/07/21	Automated Statchk
Acid Extractables by GC/MS	GC/MS	7470729	2021/07/19	2021/07/20	May Yin Mak
Chromium (VI) in Water	IC	7472209	N/A	2021/07/20	Lang Le
Mercury	CV/AA	7472290	2021/07/20	2021/07/20	Gagandeep Rai
Dissolved Metals by ICPMS	ICP/MS	7470299	N/A	2021/07/21	Arefa Dabhad
Volatile Organic Compounds in Water	GC/MS	7466780	N/A	2021/07/20	Juan Pangilinan

BV Labs ID: QCV809 Dup **Collected:** 2021/07/16
Sample ID: MW5D **Shipped:**
Matrix: Ground Water **Received:** 2021/07/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds in Water	GC/MS	7466780	N/A	2021/07/20	Juan Pangilinan

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BV Labs Job #: C1J9203
Report Date: 2021/07/22

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

TEST SUMMARY

BV Labs ID: QCV811
Sample ID: TRIP BLANK
Matrix: Ground Water

Collected: 2021/07/16
Shipped:
Received: 2021/07/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	7468774	N/A	2021/07/21	Automated Statchk
Volatile Organic Compounds in Water	GC/MS	7466780	N/A	2021/07/20	Juan Pangilinan

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BV Labs Job #: C1J9203
Report Date: 2021/07/22

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C

Results relate only to the items tested.

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BV Labs Job #: C1J9203
Report Date: 2021/07/22

QUALITY ASSURANCE REPORT

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7466780	4-Bromofluorobenzene	2021/07/20	101	70 - 130	103	70 - 130	100	%		
7466780	D4-1,2-Dichloroethane	2021/07/20	99	70 - 130	96	70 - 130	100	%		
7466780	D8-Toluene	2021/07/20	101	70 - 130	100	70 - 130	98	%		
7470729	2,4,6-Tribromophenol	2021/07/20	84	50 - 130	78	50 - 130	84	%		
7470729	2-Fluorophenol	2021/07/20	61	50 - 130	58	50 - 130	73	%		
7470729	D5-Phenol	2021/07/20	69	30 - 130	51	30 - 130	70	%		
7471597	1,4-Difluorobenzene	2021/07/20	99	70 - 130	98	70 - 130	99	%		
7471597	4-Bromofluorobenzene	2021/07/20	103	70 - 130	103	70 - 130	93	%		
7471597	D10-o-Xylene	2021/07/20	84	70 - 130	101	70 - 130	119	%		
7471597	D4-1,2-Dichloroethane	2021/07/20	101	70 - 130	96	70 - 130	107	%		
7473157	o-Terphenyl	2021/07/21	93	60 - 130	94	60 - 130	89	%		
7466780	1,1,1,2-Tetrachloroethane	2021/07/20	99	70 - 130	94	70 - 130	<0.50	ug/L	NC	30
7466780	1,1,1-Trichloroethane	2021/07/20	104	70 - 130	103	70 - 130	<0.20	ug/L	NC	30
7466780	1,1,2,2-Tetrachloroethane	2021/07/20	97	70 - 130	92	70 - 130	<0.40	ug/L	NC	30
7466780	1,1,2-Trichloroethane	2021/07/20	108	70 - 130	104	70 - 130	<0.40	ug/L	NC	30
7466780	1,1-Dichloroethane	2021/07/20	101	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
7466780	1,1-Dichloroethylene	2021/07/20	110	70 - 130	107	70 - 130	<0.20	ug/L	NC	30
7466780	1,2-Dichlorobenzene	2021/07/20	106	70 - 130	103	70 - 130	<0.40	ug/L	NC	30
7466780	1,2-Dichloroethane	2021/07/20	103	70 - 130	98	70 - 130	<0.49	ug/L	NC	30
7466780	1,2-Dichloropropane	2021/07/20	104	70 - 130	102	70 - 130	<0.20	ug/L	NC	30
7466780	1,3-Dichlorobenzene	2021/07/20	106	70 - 130	105	70 - 130	<0.40	ug/L	NC	30
7466780	1,4-Dichlorobenzene	2021/07/20	122	70 - 130	120	70 - 130	<0.40	ug/L	NC	30
7466780	Acetone (2-Propanone)	2021/07/20	119	60 - 140	109	60 - 140	<10	ug/L	NC	30
7466780	Benzene	2021/07/20	101	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
7466780	Bromodichloromethane	2021/07/20	98	70 - 130	93	70 - 130	<0.50	ug/L	8.0	30
7466780	Bromoform	2021/07/20	89	70 - 130	77	70 - 130	<1.0	ug/L	NC	30
7466780	Bromomethane	2021/07/20	103	60 - 140	99	60 - 140	<0.50	ug/L	NC	30
7466780	Carbon Tetrachloride	2021/07/20	95	70 - 130	94	70 - 130	<0.19	ug/L	NC	30
7466780	Chlorobenzene	2021/07/20	108	70 - 130	105	70 - 130	<0.20	ug/L	NC	30
7466780	Chloroform	2021/07/20	103	70 - 130	99	70 - 130	<0.20	ug/L	4.8	30
7466780	cis-1,2-Dichloroethylene	2021/07/20	106	70 - 130	103	70 - 130	<0.50	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7466780	cis-1,3-Dichloropropene	2021/07/20	112	70 - 130	102	70 - 130	<0.30	ug/L	NC	30
7466780	Dibromochloromethane	2021/07/20	89	70 - 130	85	70 - 130	<0.50	ug/L	3.7	30
7466780	Dichlorodifluoromethane (FREON 12)	2021/07/20	117	60 - 140	113	60 - 140	<1.0	ug/L	NC	30
7466780	Ethylbenzene	2021/07/20	108	70 - 130	108	70 - 130	<0.20	ug/L	NC	30
7466780	Ethylene Dibromide	2021/07/20	98	70 - 130	93	70 - 130	<0.19	ug/L	NC	30
7466780	Hexane	2021/07/20	113	70 - 130	108	70 - 130	<1.0	ug/L	NC	30
7466780	Methyl Ethyl Ketone (2-Butanone)	2021/07/20	121	60 - 140	114	60 - 140	<10	ug/L	NC	30
7466780	Methyl Isobutyl Ketone	2021/07/20	118	70 - 130	114	70 - 130	<5.0	ug/L	NC	30
7466780	Methyl t-butyl ether (MTBE)	2021/07/20	104	70 - 130	101	70 - 130	<0.50	ug/L	NC	30
7466780	Methylene Chloride(Dichloromethane)	2021/07/20	118	70 - 130	112	70 - 130	<2.0	ug/L	NC	30
7466780	o-Xylene	2021/07/20	107	70 - 130	109	70 - 130	<0.20	ug/L	NC	30
7466780	p+m-Xylene	2021/07/20	112	70 - 130	112	70 - 130	<0.20	ug/L	NC	30
7466780	Styrene	2021/07/20	119	70 - 130	121	70 - 130	<0.40	ug/L	NC	30
7466780	Tetrachloroethylene	2021/07/20	96	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
7466780	Toluene	2021/07/20	98	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
7466780	Total Xylenes	2021/07/20					<0.20	ug/L	NC	30
7466780	trans-1,2-Dichloroethylene	2021/07/20	108	70 - 130	104	70 - 130	<0.50	ug/L	NC	30
7466780	trans-1,3-Dichloropropene	2021/07/20	122	70 - 130	109	70 - 130	<0.40	ug/L	NC	30
7466780	Trichloroethylene	2021/07/20	107	70 - 130	106	70 - 130	<0.20	ug/L	NC	30
7466780	Trichlorofluoromethane (FREON 11)	2021/07/20	102	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
7466780	Vinyl Chloride	2021/07/20	105	70 - 130	100	70 - 130	<0.20	ug/L	NC	30
7470299	Dissolved Antimony (Sb)	2021/07/21	106	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
7470299	Dissolved Arsenic (As)	2021/07/21	99	80 - 120	100	80 - 120	<1.0	ug/L	NC	20
7470299	Dissolved Barium (Ba)	2021/07/21	101	80 - 120	102	80 - 120	<2.0	ug/L	1.3	20
7470299	Dissolved Beryllium (Be)	2021/07/21	103	80 - 120	96	80 - 120	<0.40	ug/L	NC	20
7470299	Dissolved Boron (B)	2021/07/21	98	80 - 120	94	80 - 120	<10	ug/L	1.9	20
7470299	Dissolved Cadmium (Cd)	2021/07/21	101	80 - 120	100	80 - 120	<0.090	ug/L	NC	20
7470299	Dissolved Chromium (Cr)	2021/07/21	96	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
7470299	Dissolved Cobalt (Co)	2021/07/21	95	80 - 120	100	80 - 120	<0.50	ug/L	4.1	20
7470299	Dissolved Copper (Cu)	2021/07/21	98	80 - 120	98	80 - 120	<0.90	ug/L	NC	20
7470299	Dissolved Lead (Pb)	2021/07/21	95	80 - 120	97	80 - 120	<0.50	ug/L	NC	20

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7470299	Dissolved Molybdenum (Mo)	2021/07/21	103	80 - 120	98	80 - 120	<0.50	ug/L	2.8	20
7470299	Dissolved Nickel (Ni)	2021/07/21	94	80 - 120	98	80 - 120	<1.0	ug/L	2.2	20
7470299	Dissolved Selenium (Se)	2021/07/21	100	80 - 120	102	80 - 120	<2.0	ug/L	NC	20
7470299	Dissolved Silver (Ag)	2021/07/21	90	80 - 120	97	80 - 120	<0.090	ug/L	NC	20
7470299	Dissolved Sodium (Na)	2021/07/21	NC	80 - 120	102	80 - 120	<100	ug/L	1.8	20
7470299	Dissolved Thallium (Tl)	2021/07/21	98	80 - 120	99	80 - 120	<0.050	ug/L	NC	20
7470299	Dissolved Uranium (U)	2021/07/21	97	80 - 120	95	80 - 120	<0.10	ug/L	3.3	20
7470299	Dissolved Vanadium (V)	2021/07/21	99	80 - 120	99	80 - 120	<0.50	ug/L	0.30	20
7470299	Dissolved Zinc (Zn)	2021/07/21	94	80 - 120	97	80 - 120	<5.0	ug/L	NC	20
7470729	2,4,5-Trichlorophenol	2021/07/20	93	50 - 130	81	50 - 130	<0.1	ug/L		
7470729	2,4,6-Trichlorophenol	2021/07/20	95	10 - 130	83	10 - 130	<0.1	ug/L		
7470729	2,4-Dichlorophenol	2021/07/20	90	50 - 130	76	50 - 130	<0.1	ug/L		
7470729	2-Chlorophenol	2021/07/20	79	50 - 130	78	50 - 130	<0.1	ug/L		
7470729	Pentachlorophenol	2021/07/20	94	50 - 130	88	50 - 130	<0.1	ug/L		
7471597	Benzene	2021/07/20	98	50 - 140	100	50 - 140	<0.20	ug/L	NC	30
7471597	Ethylbenzene	2021/07/20	105	50 - 140	111	50 - 140	<0.20	ug/L	NC	30
7471597	F1 (C6-C10) - BTEX	2021/07/20					<25	ug/L	NC	30
7471597	F1 (C6-C10)	2021/07/20	83	60 - 140	87	60 - 140	<25	ug/L	NC	30
7471597	o-Xylene	2021/07/20	102	50 - 140	106	50 - 140	<0.20	ug/L	NC	30
7471597	p+m-Xylene	2021/07/20	102	50 - 140	108	50 - 140	<0.40	ug/L	NC	30
7471597	Toluene	2021/07/20	94	50 - 140	98	50 - 140	<0.20	ug/L	NC	30
7471597	Total Xylenes	2021/07/20					<0.40	ug/L	NC	30
7472209	Chromium (VI)	2021/07/20	108	80 - 120	109	80 - 120	<0.50	ug/L	2.4	20
7472290	Mercury (Hg)	2021/07/20	94	75 - 125	93	80 - 120	<0.10	ug/L	NC	20
7473157	F2 (C10-C16 Hydrocarbons)	2021/07/21	84	60 - 130	88	60 - 130	<100	ug/L	NC	30
7473157	F3 (C16-C34 Hydrocarbons)	2021/07/21	85	60 - 130	91	60 - 130	<200	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
7473157	F4 (C34-C50 Hydrocarbons)	2021/07/21	91	60 - 130	95	60 - 130	<200	ug/L	NC	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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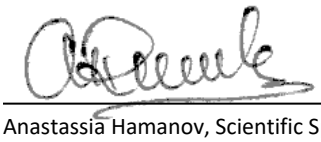
BV Labs Job #: C1J9203
Report Date: 2021/07/22

exp Services Inc
Client Project #: BRM-00239423-E0
Site Location: ANN ST & HIGH ST.
Sampler Initials: JB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Anastassia Hamanov, Scientific Specialist

BV Labs has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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16-Jul-21 13:46

Ema Gitej

C1J9203

KTN ENV-1241

Presence of Visible Particulate/Sediment

Maxxam Analytics
CAM FCD-01013/5

When there is >1cm of visible particulate/sediment, the amount will be recorded in the field below

Bottle Types

			Inorganics					Organics											Hydrocarbons							Volatiles				Other
	Sample ID	All	CrVI	CN	General	Hg	Metals (Diss.)	Organic 1 of 2	Organic 2 of 2	PCB 1 of 2	PCB 2 of 2	Pest/ Herb 1 of 2	Pest/ Herb 2 of 2	SVOC/ ABN 1 of 2	SVOC/ ABN 2 of 2	PAH 1 of 2	PAH 2 of 2	Dioxin /Furan	F1 Vial 1	F1 Vial 2	F1 Vial 3	F1 Vial 4	F2-F4 1 of 2	F2-F4 2 of 2	F4G	VOC Vial 1	VOC Vial 2	VOC Vial 3	VOC Vial 4	
1	MW1							TS																		TS	TS	TS		
2	MW11																									TS	TS	TS		
3	MW35	TS																												
4	MW5D							TS	TS																	TS	TS	TS		
5																														
6																														
7																														
8																														
9																														
10																														

Comments:

Legend:	
P	Suspended Particulate
TS	Trace Settled Sediment (just covers bottom of container or less)
S	Sediment greater than (>) Trace, but less than (<) 1 cm

Recorded By: (signature/print) VITRINH

16-Jul-21 13:46
Patricia Legette
C1J9203

Page 1 of 1

CHAIN OF CUSTODY RECORD

2395 Speakman Drive, Mississauga, Ontario Canada L5K 1B3 Tel: (905) 817-5700 Toll-free: 800-563-6266 Fax: (905) 817-5777 www.bvlabs.com

Company Name:	#9590 exp Services Inc
Attention:	Central Services
Address:	1595 Clark Blvd Brampton ON L6T 4V1
Tel:	(905) 793-9800 Fax: (905) 793-0641
Email:	AP@exp.com; Karen.Burke@exp.com

REPORT TO:

Company Name:	EXP
Attention:	Samuel Lee
Address:	1595 CLARK BLVD BRM
Tel:	(905) 793-9800 Fax:
Email:	Samuel.Lee@exp.com

PROJECT INFORMATION:

Quotation #:	B91716 STREAM 3
P.O. #:	
Project:	BRM-00239423-E0
Project Name:	ANN ST & HIGH ST.
Site #:	
Sampled By:	JB

Laboratory Use Only:

BV Labs Job #:	Bottle Order #: 836582
COC #: C#836582-01-01	Project Manager: Patricia Legette

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BV LABS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☒ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions:

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (If applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Metals Package	Acid Extractables by GC/MS	VOCs by HS	PHCs: BTEX/F1-F4	Chlorophenols	# of Bottles	Comments
1		MW1	JULY 15,21	AM	GW	yes	X		X		X	7	
2		MW11	JULY 15,21	AM	GW.	yes	X		X			6	
3		MW3S	JULY 16,21	AM	GW					X		4	Trace silt observed
4		MW5D	JULY 16,21	AM	GW	yes	X		X		X	8	
5		Trip Blank							X			2	
6													
7													
8													
9													
10													

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
JILIAN BARNETT	JULY 16/21	1:45pm	[illegible]	21/07/16	13:46	

Laboratory Use Only ON ICE

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Present	Yes	No
	3/6/8	Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BV LABS' STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVLABS.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVLABS.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BV LABS

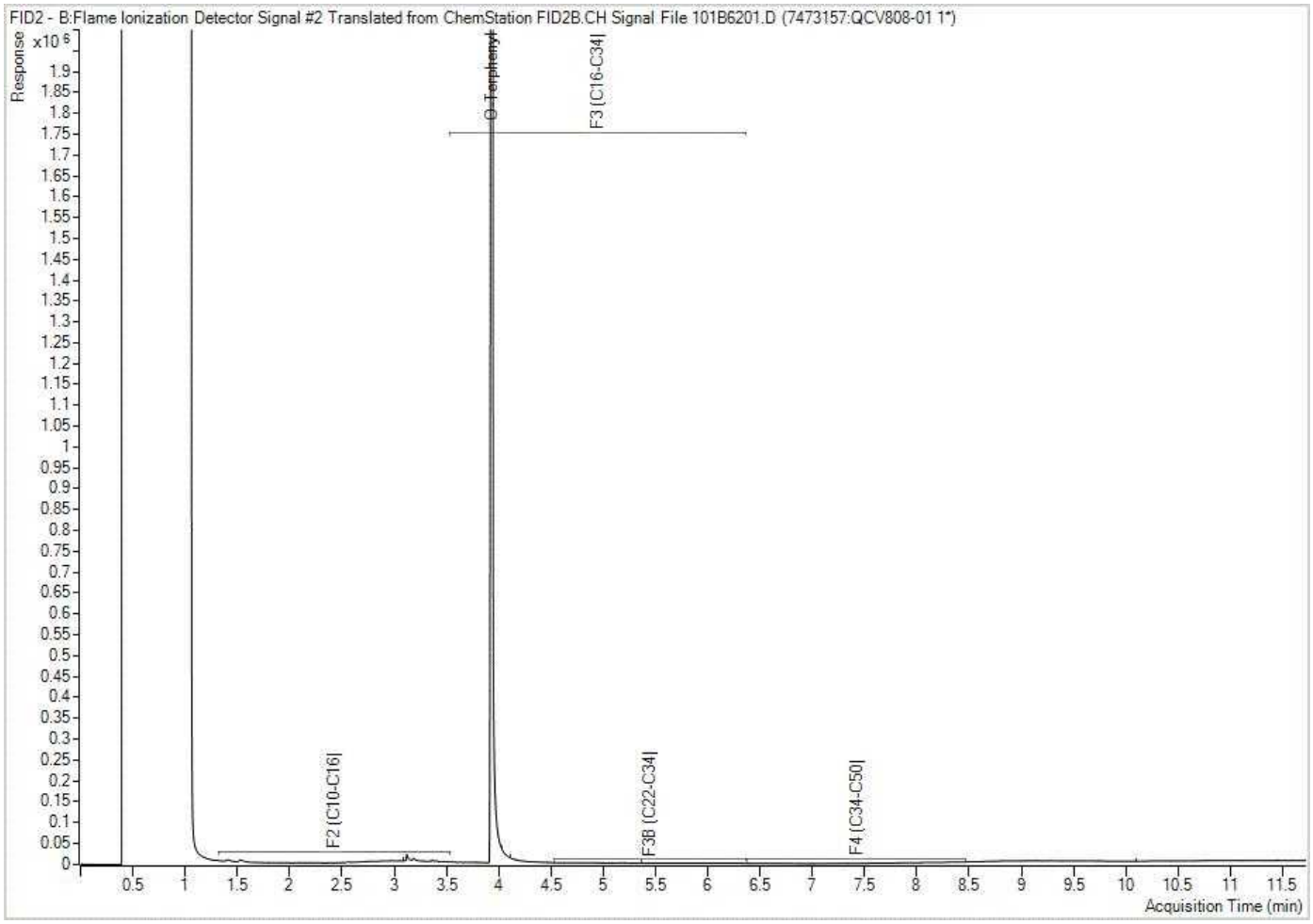
White: BV Labs Yellow: Client

Bureau Veritas Canada (2019) Inc.

BV Labs Job #: C1J9203
Report Date: 2021/07/22
BV Labs Sample: QCV808

exp Services Inc
Client Project #: BRM-00239423-E0
Project name: ANN ST & HIGH ST.
Client ID: MW35

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Appendix F – Phase Two Conceptual Site Model (Entire Site)

Phase Two Conceptual Site Model – 84, 90 High Street East and 17, 19 Ann Street and Park Lot, Mississauga, ON

This section presents a Phase Two Conceptual Site Model (P2CSM) providing a narrative, graphical and tabulated description integrating information related to the Site geologic and hydrogeologic conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of potential contaminants of concern, contaminant fate and transport, and potential exposure pathways. These components are discussed in the following sections. The Phase Two CSM was completed in accordance with O. Reg.153/04 as defined by the Ministry of the Environment, Conservation, and Parks (MECP).

1. Introduction

The Site is municipally known as 84, 90 High Street East, 17, 19 Ann Street in Mississauga, and includes a Park Lot with no municipal address. It is located on the west side of Hurontario Street and is bound by High Street East, Park Street East and Ann Street, as shown on Figure 1. Based on a review of historical records, the Site was first developed circa 1909 for residential use. Currently, the Site consisted of one (1) commercial building, three (3) residential buildings and a landscaped park on the northeast portion of the Site. The Site measures approximately 0.75 hectares (1.85 acres). The areas surrounding the Site consist of community property to the north, residential properties to the east, commercial properties to the south and west.

Refer to Table 1 for the Site identification information.

Table 1: Site Identification Information

Municipal Address	84, 90 High Street East, 17, 19 Ann Street and a Park Lot with o municipal address, Mississauga, Ontario
Current Land Use	Parkland / Residential / Commercial
Proposed Land Use	Residential
Legal Description	PT LT 1, PL PC2 ECR, S/S PARK ST, PT 1 43R19415; SUBJECT TO AN EASEMENT IN GROSS OVER PT 1 PL 43R-33186 AS IN PR1856898; CITY OF MISSISSAUGA PT LT 1, PL PC2 ECR, S/S PARK ST AS IN RO660261; MISSISSAUGA PT LT 1, PL PC2 ECR, S/S PARK ST AS IN RO1128856; MISSISSAUGA PT LT 1, PL PC2 ECR, N/S HIGH ST AS IN RO768460; MISSISSAUGA PT LT 1, PL PC2 ECR, N/S HIGH ST AS IN RO998249; MISSISSAUGA
Property Identification Number(s) (PIN)	13463-0014 (LT) 13463-0015 (LT) 13463-0016 (LT) 13463-0034 (LT) 13463-0035 (LT)
Approximate Universal Transverse Mercator (UTM) coordinates	NAD83 17T 614395 m E 4823552 m N
Accuracy Estimate of UTM	10-15 m
Measurement Method	Google Earth

Site Area	0.75 hectares (1.85 acres)
Property Owners, Owner Contact and Address	**Property Owner**: 10 West Go GP Inc. and the Corporation of the City of Mississauga **Contact**: Mr. Anthony Di Santo **Address**: 141 Lakeshore Road East, ON L5G 1E8

2. Potentially Contaminating Activities and Areas of Potential Environmental Concern

2.1 Potentially Contaminating Activities

A Phase One ESA, in accordance with O.Reg.153/04, was conducted by EXP in January 2021 for the Phase One Property. A total of twenty-nine (29) off-Site potentially contaminating activities (PCAs) were identified within 250 m from the Phase One Property Site boundaries. Furthermore, during our Phase Two subsurface investigation, two (2) additional on-Site PCAs were identified. All thirty-one (31) PCAs that were identified within 250 m property are shown on Figure 2. Each PCA was further evaluated to determine if the activity may be contributing to an area of potential environmental concern (APEC) at the Phase One Property.

The QP determined that select PCAs may contribute to an APEC for the property, while several PCAs were determined to not contribute to an APEC at the Phase One Property/Site due to various factors including, but not limited to, relative distance to the Phase One Property/Site, orientation to the Phase One Property/Site; degree and nature of PCA operations, potentially impacted media, etc. Refer to Table 2 for the evaluation of the PCAs in the Phase One Study Area.

Table 2: Potentially Contaminating Activities in the Phase One Study Area

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
Site					
1*	84, 90 High Street East and 17, 19 Ann Street	On-Site	PCA #30 – Importation of Fill Material of Unknown Quality	During our Phase Two subsurface investigation, fill material was encountered at the boreholes in the southern and western portions of the Site.	Yes, based on the PCA occurring on-Site.
2*	The paved driveways/walkways at 84, 90 High Street	On-Site	PCA # Other – Use of De-icing and Salting Substances	The southern portion of the site was developed with private driveways; de-icing and salting substances were thought to be routinely applied throughout the driveways surface, during the winter months for vehicular and pedestrian safety. The use of road salt at the Site is considered a PCA	Yes, based on the PCA occurring on-Site.
Surrounding Properties					

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
3	88 Park Street East	20 m north	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products.	Based on the reviewed FIP, the property was occupied by W.H. Thompson, which is a lumber yard, it is noted that one (1) underground storage tanks (USTs) is present on the east-central portion of the property, approximately 65 m north of the Site.	Yes, based on the close proximity of the lumber yard to the site. The UST is not considered to contribute to an APEC due to the separation distance from the site.
4	76 & 78 Queen Street East	125 m north	PCA#46 – Rail Yards, Tracks and Spurs.	Based on the reviewed FIP, the property was occupied by C.N.R Port Credit Station.	No, based on the separation distance to the Site.
5	136 Lakeshore Road East	65 m south	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, the property was occupied by Bruce MacDougall Motors, it is noted that a paint shop is present on the property and that two (2) underground storage tanks (USTs) are present on the northwest portion of the property, approximately 70 m south of the Site.	No, based on the inferred hydraulically down-gradient location relative to the Site.
6	114 Lakeshore Road East	105 m southwest	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, ERIS Report and City Directories, the property was occupied by various gasoline service stations, it is noted that three (3) underground storage tanks (USTs) are present on the southwest portion of the property in the 1952 FIP and four (4) USTs are listed in the ERIS Report.	No, based on the inferred hydraulically down-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
7	139 Lakeshore Road East	145 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA 'Other' – Use and storage of Coal.	Based on the reviewed FIP, the property was occupied by St. Lawrence Starch Co. Limited, it is noted to be fueled by coal, with one (1) coal bin and an area labelled large coal piled. Additionally, five (5) corn oil tanks, two (2) fuel oil underground storage tanks (USTs) and one (1) gasoline UST are present.	No, based on the inferred hydraulically down-gradient location relative to the Site.
8	144 Lakeshore Road East	75 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, the property was occupied by a gasoline service station, it is noted to have two (2) greasing portions in the building and that four (4) USTs are present on the east portion of the property, approximately 130 m southeast of the Site.	No, based on the inferred hydraulically down-gradient location relative to the Site.
9	156 Lakeshore Road East	150 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, the property was occupied by a gasoline service station, it is noted as greasing in the building and that three (3) USTs are present on the east portion of the property, approximately 175 m southeast of the Site	No, based on the inferred hydraulically down-gradient location relative to the Site.
10	162 & 170 Lakeshore Road East	210 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and	Based on the reviewed FIP, the property was occupied by Elmwood Motors and a gasoline service station, it is noted to have a greasing portion in the building and that three (3) USTs are present on the south portion of the property, approximately 240 m southeast of the Site.	No, based on the inferred hydraulically down-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
			material used to maintain transportation systems.		
11	80 High Street East	15 m west	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the record review, the property was listed as having one (1) double wall 5000 L fuel oil underground storage tank installed in 2014. The location of the UST is approximately 30 m southwest of the Site.	Yes, based on the close proximity to the site and occupancy since at least the 1950s.
12	150 Lakeshore Road East	75 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Based on the reviewed ERIS Report and City Directories, the property was occupied by Pioneer Petroleum's, Pioneer Gas & Car Wash, R & L Auto Glazing and Pioneer Gas & Wash Centre between 1972/73 to present. The property was listed as having between four (4) and six (6) gasoline/diesel underground storage tanks (USTs).	No, based on the inferred hydraulically down-gradient location relative to the Site.
13	20 Rosewood Avenue	85 m east	PCA 'Other' – Spill of diesel fuel.	Based on the reviewed ERIS Report, Greenspoon Specialty Contracting Ltd. reported a spill of 500 L of diesel and water to the ground from an underground tank in 2010, with soil contamination confirmed.	No, based on the separation distance and inferred hydraulically trans-gradient location relative to the Site.
14	Hurontario Street and Lakeshore Road East	115 m south	PCA 'Other' – Spill of diesel fuel.	Based on the reviewed ERIS Report, Karbro Transport Inc. reported a spill of 100 L of diesel fuel to the road and catch basin in 2011, with possible surface water contamination.	No, based on the inferred hydraulically down-gradient location relative to the Site.
15	152 Lakeshore Road East	75 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment,	Based on the reviewed ERIS Report, the property was occupied by Parkland Fuel Corporation and was listed as a registered waste generator of oil skimmings & sludges and light fuels in 2017.	No, based on the inferred hydraulically down-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
			vehicles, and material used to maintain transportation systems.		
16	158 Lakeshore Road East	150 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed ERIS Report, the property was occupied by Beaver Fuels Management and was listed as a gasoline service station and having five (5) expired fuel tanks in 1992.	No, based on the inferred hydraulically down-gradient location relative to the Site.
17	145 Lakeshore Road East	160 m southeast	PCA#20 – Explosives and Ammunition Manufacturing, Production and Bulk Storage.	Based on the reviewed ERIS Report, the property was occupied by Nordex Explosives Ltd. and was listed as an 'Explosives Manufacturing' company in the business directories.	No, based on the inferred hydraulically down-gradient location relative to the Site.
18	141 Lakeshore Road East	145 m southeast	PCA#55 – Transformer Manufacturing, Processing and Use. PCA 'Other' – Spill of petroleum product. PCA 'Other' – Starch manufacturing.	Based on the reviewed ERIS Report, the property was occupied by St. Lawrence Starch Co. and was listed as a PCB storage from transformers and ballasts. They also reported a spill of 100 L oil from a hoist during concrete removal, with soil contamination confirmed. Additionally, they were listed as a registered waste generator of various wastes including; petroleum distillates and oil skimmings & sludges from 1986 to 2003.	No, based on the inferred hydraulically down-gradient location relative to the Site.
19	20 Forest Avenue	160 m east	PCA 'Other' – PCB storage.	Based on the reviewed ERIS Report, the property was occupied by Mississauga Hydro (PCB) and was listed as a registered waste generator from 1990 to 1994; however, no wastes were defined.	No, based on the inferred hydraulically trans-gradient location relative to the Site.
20	Currently 33 Compass Way (former St.	190 m southeast	PCA#28 – Gasoline and Associated	Based on the reviewed ERIS Report, a petroleum tank was listed on the	No, based on the separation distance relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
	Lawrence Starch Factory property)		Products Storage in Fixed Tanks.	Aboveground Storage Tank (OFG ID: 1200714522) database for the property.	
21	160 Lakeshore Road East	195 m southeast	PCA#10 – Commercial Autobody Shops PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed ERIS Report, the property was occupied by Stephensons Rent All Ltd. was listed as a registered waste generator of petroleum distillates, light fuels, oil skimmings & sludges and waste oils & lubricants from 1988 to 2003; and halogenated solvents from 1989 to 2003. Based on the city directories, G&M Autmotive Service Centre and Perma Shine were located at the property in 1977/78. Additionally, based on the Site visit observations the property was occupied by Midas, an auto repair shop.	No, based on the separation distance relative to the Site.
22	Currently 24 Compass Way former St. Lawrence Starch Factory property)	200 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714518) database for the property.	No, based on the separation distance relative to the Site.
23	Currently 34 Compass Way former St. Lawrence Starch Factory property)	195 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714524) database for the property.	No, based on the separation distance relative to the Site.
24	Currently 25 Compass Way former St. Lawrence Starch Factory property)	195 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714517) database for the property.	No, based on the separation distance relative to the Site.
25	Currently 15 Compass Way former St. Lawrence Starch Factory property)	200 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714519) database for the property.	No, based on the separation distance relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
26	111 Lakeshore Road East	200 m southwest	PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used).	Based on the reviewed ERIS Report, the property was occupied by Seaway Cleaners, Rosalnaaz Investments Inc. and 2088466 Ontario Limited and were listed as a registered waste generator of halogenated solvents from 1999 to 2008. Additionally, Seaway Cleaners was listed on the Dry-Cleaning Facilities in 2004 with 234 kg of perchloroethylene noted.	No, based on the separation distance relative to the Site.
27	103 Lakeshore Road East	225 m southwest	PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used).	Based on the reviewed ERIS Report and City Directories, the property was occupied by Seaway Cleaners, and was listed as a registered waste generator of halogenated solvents from 1986 to 2000.	No, based on the separation distance relative to the Site.
28	Currently 9 Compass Way (former St. Lawrence Starch Factory property)	200 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714513) database for the property.	No, based on the separation distance relative to the Site.
29	99 Lakeshore Road East	230 m southwest	PCA 'Other' – Spill of petroleum product.	Based on the reviewed ERIS Report, a spill was reported for the property of an unknown amount of fuel in 2002, with soil contamination confirmed.	No, based on the separation distance relative to the Site.
30	27 Helene Street North	115 m northwest	PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used).	Based on the city directories, Sheridan Cleaners, Sheridan Drycleaners & Launderers and Kwik Kleen Drycleaners were located at the property between 1972 and 2000.	No, based on the separation distance relative to the Site.
31	102 Lakeshore Road East	200 m southwest	PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used).	Based on the city directories, Holiday Cleaners was located at the property in 1972/73.	No, based on the separation distance relative to the Site.

*Additional PCAs identified during this Phase Two ESA.
(1) These are approximate distances taken from the Site boundaries.
(2) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg 153/04, as amended) that is occurring or has occurred in a phase one Study area.

2.2 Areas of Potential Environmental Concern

Based on the evaluation of the PCAs located within the Phase One Study Area, areas of potential environmental concern (APECs) were identified, as presented in Figure 4, and summarized in Table 3 below.

Table 3: Areas of Potential Environmental Concern (APECs)

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[(1)]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1*: Fill of Unknown Quality	Southern and Western Portions of the Site	PCA1: # 30 Importation of Fill Material of Unknown Quality	On-Site	PAHs and Metals, B-HWS, Cr (VI), Hg, As, Sb, Se	Soil
APEC 2**: Application of De-icing and Salting Substances in the Driveways	Southern Portion of the Site (pavement area)	PCA2: # Other – Use of De-icing and Salting Substances	On-site	Soil: EC and SAR	Soil
APEC 3: Lumber yard located to the immediate north of the site, including chemical extraction (88 Park Street East)	Northern Portion of the Site	PCA 3: #59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Off-Site	Metals, CPs, VOCs	Groundwater
APEC 4: UST at neighbouring property (80 High Street East)	Western Portion of the Site	PCA 11: #28- Gasoline and Associated Products Storage in Fixed Tanks (PCA 8)	Off-Site	PHCs, BTEX	Groundwater

*Fill material was encountered at the boreholes in the southern and western portions of the Site during the Phase Two ESA.

** The southern portion of the site was developed with private driveways; de-icing and salting substances were thought to be routinely applied throughout the driveways surface, during the winter months for vehicular and pedestrian safety. The use of road salt at the Site is considered a PCA, leading to an APEC.

[(1)] Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg 153/04, as amended) that is occurring or has occurred in a phase one Study area.

VOCs = volatile organic compounds; PHCs = petroleum hydrocarbons; PAHs = polycyclic aromatic hydrocarbons; BTEX = benzene, toluene, ethylbenzene and xylenes; Sb = antimony; As = arsenic; Se = selenium, B-HWS = boron hot water soluble; CrVI = chromium VI; Hg = mercury, CN = cyanide; EC = electrical conductivity, SAR = sodium adsorption ratio; CPs = Chlorophenols

Refer to Figure 4 for the location of APECs on the Site. Boreholes/monitoring wells advanced on the Site to investigate the identified APECs are shown on Figure 5A. Figure 5B shows the locations of boreholes/monitoring wells with respect to the APECs on the Site.

2.3 Underground Utilities

The Site utilities and services were identified at the Site based on information provided in environmental records and relevant utility infrastructure observed during the Site reconnaissance. The Site utilities are summarized in the table below and noted on Figure 3, where available. It is noted that the precise underground location of the utilities cannot be determined without professional locate services. No COC was identified at the Site; therefore, there is no potential risk of contaminants migration due to subsurface structure and underground utilities.

Table 4: Site Utilities

Utility	Source	Location	Site Entry
Natural Gas	Enbridge Gas	Unknown	N/A
Sanitary Sewer	City of Mississauga	Unknown	N/A
Storm Sewer	City of Mississauga	Unknown	N/A
Water	City of Mississauga	Unknown	N/A
Electricity	Toronto Hydro	Unknown	N/A
Telecommunications	Unknown	Unknown	N/A

3. Physical Site Description

3.1 Geological and Hydrogeological Conditions

The Site and surrounding areas are expected to consist of Deltaic and Lacustrine Deposits predominantly gravelly sand and silty sand. The bedrock in the general area of the Site is part of a group belonging to the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member and Eastview Member consisting of shale, limestone, dolostone and siltstone.

A review of the topographic map indicated that the Lake Ontario is located approximately 350 m south of the Site. Based on local topography the inferred groundwater flow direction is expected to flow to the south/southeast toward Lake Ontario.

Based on the review of available resources from the Ministry of Natural Resources and Forestry website on February 26, 2021, no areas of natural significance were identified at the Site or within 30 m of the Site. In addition, based on the review of the available resources, no water well is located at the Site.

The general stratigraphy at the Site, as observed in the boreholes, consisted of asphalt/topsoil at the surface generally overlying layers of fill/reworked native, followed by sandy silt and clayey silt till. Bedrock was encountered at depths ranging from 7.44 mbgs and 9.14 mbgs. A brief description of the soil stratigraphy at the Site, in order of depth, is summarized in the following sections.

A cross section plan is provided as Figure 5A. Cross Sections showing the general stratigraphy of the Site is presented in Figures 17 and 18.

3.1.1 Surface Material

Asphalt was encountered at BH2, BH3D, BH3S, BH4, BH8 and BH9 with a thickness of ranging between 0.025 m and 0.05 m, overlaying layers of granular base with a thickness ranging between 0.125 m and 0.53 m.

Topsoil was encountered at BH1, BH5D, BH5S, BH7 and BH10 with thickness ranging between 0.15 m and 0.30 m.

Sandy silt was encountered at the surface of BH6, extending to a depth of 3.05 mbgs.

3.1.2 Fill Material

Fill was encountered in eight (8) boreholes (BH3D, BH3S, BH4, BH8, BH9 and BH10). The fill material was found below topsoil/asphalt (with granular base) in all boreholes except BH1, BH2, BH5D, BH5S, BH6 and BH7. The fill typically consisted of brown clayey silt, sandy silt with trace clay, rootlets and black sand. This layer extended to depths varying from 0.90 to 2.57 m below the existing ground surface.

The reworked material was found below topsoil/asphalt (with granular base) in BH1, BH2, BH5D, BH5S, BH6 and BH7.

3.1.3. Native Material

Sandy silt was encountered in BH1, BH3D, BH3S, BH5D, BH5S and BH7, below the fill material. The silty sand contained some clay and extended to depths varying from 1.52 m bgs to 2.29 m bgs.

Clayey Silt Till was encountered in BH1, BH2, BH3D, BH3S, BH4, BH5D, BH5S, BH6, BH8, BH9 and BH10 below the sandy silt layer of fill material. The clayey silt contained trace sand and gravel. This layer extended to depths varying from 7.44 m bgs to 9.14 m bgs.

3.1.4 Bedrock

Bedrock was encountered at depths ranging from 7.44 mbgs and 9.14 mbgs, at boreholes (BH1, BH2, BH3D, BH4, BH5D, BH6 and BH7).

3.2 Hydrogeology

Taking into consideration of the local topography and surface water features in the surrounding area, the regional groundwater flow direction is inferred to be southerly to southeasterly towards the Lake Ontario. Based on the groundwater contour maps delineated for the Site, the shallow groundwater is anticipated to flow in a westerly direction, while the deep groundwater is anticipated to flow in an easterly to southeasterly direction. Please notes that the direction of localized groundwater flow may be influenced by disturbed soil (fill or reworked material), underground utilities and/or underground building structures in the area. As such, the measured groundwater flow direction may not be representative of the regional area. A shallow groundwater contour map is presented in Figure 6A and a deep groundwater contour map is presented in Figure 6B. Refer to Table 5 for the Site hydrogeology characteristics based on groundwater monitoring observations.

Table 5: Site Hydrogeology Characteristics

Location	Observation
Depth to Groundwater[1]	3.79 m bgs to 10.50 m bgs
Groundwater Elevation[1]	71.71 m asl to 77.17 m asl
Direction of Groundwater Flow (shallow)	Westerly (measured)
Direction of Groundwater Flow (deep)	Easterly to Southeasterly (measured)
Direction of Regional Groundwater Flow	Southerly to Southeasterly (towards Lake Ontario) (inferred)
Horizontal Hydraulic Gradient[2] (Shallow)	0.009 m/m (between MW3S and MW5s) and 0.034 m/m (between MW2 and MW3S)
Horizontal Hydraulic Gradient[2] (Deep)	0.006 m/m (between MW3D and MW7) and 0.088 m/m (between MW6 and MW7)

[1] Depth to groundwater reported for monitoring wells with screen intervals straddling the water table.
[2] horizontal hydraulic gradients calculated based upon data collected on July 15, 2021.
m asl = meters above sea level

3.3 Site Sensitivity

The Site Sensitivity classification with respect to the conditions set out under Sections 35, 41 and 43.1 of O.Reg.153/04 were evaluated to determine if the Site is sensitive, as presented in Table 6.

Table 6: Site Sensitivity

Sensitivity	Classification	Does Sensitivity Apply to Site?
Section 35 applies if	(i) The full depth generic site condition standards in a non-potable groundwater condition	No
	(ii) The stratified site condition standards in a non-potable groundwater condition	No
	(iii) The property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the property, are supplied by a municipal drinking water system	Yes
	(iv) The record of site condition does not specify agricultural or other use as the type of property use	Yes
	(v) The property is located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater	No
	(vi) The property or one of the properties in the phase one study area has a well used or intended for use as a source of water for human consumption or agriculture.	No
	(vii) A person authorized by the owner of a property has given the clerk of the municipality a written notice of intention to apply the standards in preparing a record of site condition for the property.	No
Section 41 applies if	(i) property is within an area of natural significance	No
	(ii) property includes or is adjacent to an area of natural significance or part of such an area (City of Toronto's Environmental Significant Area)	No
	(iii) property includes land that is within 30 m of an area of natural significance or part of such an area (City of Toronto's Environmental Significant Area)	No
	(iv) soil at property has a pH value for surface soil less than 5 or greater than 9	No
	(v) soil at property has a pH value for sub-surface soil less than 5 or greater than 11	No
	(vi) a qualified person is of the opinion that, given the characteristics of the property and the certifications the qualified person would be required to make in a record of site condition in relation to the property as specified in Schedule A, it is appropriate to apply this section to the property	No
Section 43.1 applies if	(i) property is a shallow soil property	No
	(ii) property includes all or part of a water body or is adjacent to a water body or includes land that is within 30 m of a water body	No

3.4 Current and Proposed Property Use

It is understood that the Site is intended to be re-developed for mixed-use residential/commercial land use. It is understood that the redevelopment will include a high-rise residential building, two (2) to twenty-two (22) storeys high, with ground floor commercial and four (4) levels of underground parking. The lowest level (P4) will be at approximately 12.5 metres below ground surface (mbgs) at the north-west portion of the site.

4. Contaminants of Concern

For assessment purposes, the MECP (2011) Table 2: Full Depth Generic Site condition Standards in a Potable Ground Water Condition for Residential/Parkland/Institutional Property Use and medium and fine textured soil was considered applicable for determining contaminants of concern (COCs), based on the rationale presented in Table 7.

Table 7: Site Condition Standards

Description	Site Specific Condition
Section 35 Site Sensitivity	Not Applicable • Potable Site Condition Standards has been applied for the Site.
Section 41 Site Sensitivity	Not applicable • The soil at the Site has pH values between 5 and 9 for surficial soil; and, between 5 and 11 for subsurface soil. • The Site is not located within, and/or located adjacent to an area of natural significance/an environmentally sensitive area.
Section 43.1 Site Sensitivity	Not applicable • The Site is not considered a shallow soil property, based on the recovered soil cores, which indicated that more than two-thirds of the Site has an overburden thickness in excess of 2 m. • The Site is not located within 30 m of a surface water body
Land Use	Residential/Parkland/Institutional • The proposed future use of the Site is for residential land use.
Soil Texture	Medium to fine textured • The predominant texture of soils at the Site is considered to be fine, based on grain size analysis and soil characteristics identified in the borehole logs and 75 micron sieve.

A summary of the assessment of each pCOC within each APEC and soil and groundwater analytical results are presented on plan view on Figures 7 through 16.

The Phase Two ESA were completed to assess the impacts of the PCAs on soil and groundwater within the four (4) APECs identified on-site. A summary of the assessment of APECs is provided in Table 8.

Table 8: Summary of Subsurface Assessments

APEC	Location of APEC on Phase Two Property	PCA[1]	Location of PCA	pCOC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 2 SCS)
APEC 1	Southern portion of the Site	(30) Importation of Fill Material of Unknown Quality	On-site	Soil: PAHs and Metals, B-HWS, Cr (VI), Hg, As, Sb, Se	Five (5) boreholes (BH3D, BH4, BH8, BH9, and BH10) was advanced within APEC 1. Soil: Soil samples were collected from BH3D, BH4, BH8, BH9, and BH10, at depths ranging from 0.04 to 1.4 mbgs and analyzed for PAHs. Soil samples were collected from BH4, BH8, BH9, and BH10at depths ranging from 0.04 to 2.13 mbgs and analyzed for Metals, B-HWS, Cr (VI), Hg, As, Sb, Se. Please notes that CN- was analyzed at BH10 at depth of 1.52 to 2.13 mbgs to assess the general background quality of soil. The cyanide is a pCOC in the identified APECs within the Site.	Soil: No exceedance was identified in the soil samples.
APEC 2	Southern Portion of the Site (pavement area)	(other) de-icing activities	On-Site	Soil: EC and SAR	Five (5) boreholes (BH3D, BH4, BH8, BH9, and BH10) was advanced within APEC 2. Soil: Soil samples were collected from BH3D, BH4, BH8, BH9, and BH10, at depths ranging from 0.04 to 2.13 mbgs and analyzed for EC and SAR.	Soil: Sodium Adsorption Ratio in sample BH8 SS1/SS2 exceed Table 2 SCS. *The elevated EC and SAR in soil is likely associated with road salt application on the paved parking lot for road safety of vehicular or pedestrian traffic under conditions of snow or ice or both. As such, the elevated EC and SAR in soil is deemed not to be exceeded the Table 2 SCS based on the section 49.1 of O.Reg. 407/19.*

APEC	Location of APEC on Phase Two Property	PCA[1]	Location of PCA	pCOC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 3 SCS)
APEC 3	Northern Portion of the Site	(59) Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Off-Site	Groundwater: Metals, CPs, VOCs	Two (2) boreholes with monitoring well (BH/MW1 and MW/5D) were advanced within APEC 3. Groundwater: Groundwater samples were collected from BH/MW1 and BH/MW5D for metals, As, Sb, Se, VOCs, BTEX, CPs, and Na. Please notes that Na was not a pCOC of the identified APEC within the Site. The Na was analyzed together with metals and hydride metals in the laboratory.	Groundwater: No exceedance was identified in groundwater sample except the concentration of Na. *The elevated sodium is likely associated with road salt application on the adjacent roadways (Park Street East and Ann Street) for road safety of vehicular or pedestrian traffic under conditions of snow or ice or both. As such, the elevated sodium in groundwater is deemed not to be exceeded the Table 2 SCS based on the section 49.1 of O.Reg. 407/19.*
APEC 4	Western Portion of the Site	(28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	Groundwater: PHCs, BTEX	One (1) borehole with monitoring well (BH/MW3S) were advanced within APEC 3. Groundwater: Groundwater sample was collected from BH/MW3S for PHC, BTEX.	Groundwater: No exceedance was identified in groundwater sample.

4.1 Soil Impacts

A chemical constituent was selected as a potential COC (pCOC) if it identified as such in the Phase One ESA.

Soil samples were submitted for the analysis of PAHs, metals (including As, Sb and Se), B-HWS, Cr(VI), Hg, EC, SAR and pH. All soil samples were either non-detect or detected below their applicable MECP (2011) Table 2 SCS with the following exceptions:

- Sodium Adsorption Ratio in sample BH8 SS1/SS2.

Soil analytical results are presented on plan view in Figures 7 through 11.

4.1.2 Deicing Salt Related Parameters in Soil

The identified impacts of SAR in soil is likely to be attributable to the application of de-icing salts at the driveways on-Site and/or salting of the adjacent municipal roadway (i.e. Hurontario Street) during winter months for the purpose of snow and ice removal. As such, it is the QP_{ESA}'s opinion that the applicable Table 2 SCS for SAR at the Site were exceeded solely because salt was used on the road for the purpose of keeping the road safe for traffic under conditions of snow or ice or both, and therefore is not considered as exceeding the Table 2 SCS per the exemption set out in Section 49.1 (1) of O. Reg. 153/04.

4.2 Groundwater Impacts

Groundwater samples were submitted for the analysis of of PHCs (including BTEX), VOCs, CPs and metals (including As, Sb and Se), Cr(VI), Hg and Sodium. All groundwater parameters were either non-detected or detected below their applicable MECP (2011) Table 2 SCS with the following exceptions:

- One groundwater sample (MW1 and its duplicate MW11) exhibited elevated level of sodium.

Groundwater analytical results are presented on plan view in Figures 12 through 16.

4.2.2 Deicing Salt Related Parameters in Groundwater

It is also noted that elevated sodium in the groundwater samples from MW1 and its duplicate (MW11) is related to the application of salting and de-icing substances at the driveway or adjacent roadways for the purpose of snow and ice removal during the winter months. As per Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants - Exceptions), and Part IX, Subsection 49.1 of Ontario Regulation 153/04, the concentration of SAR is deemed not to be exceedances of the MECP Table 2 SCS. As such, it is the QP_{ESA}'s opinion that the applicable Table 2 SCS for sodium in groundwater at the site was exceeded solely because salt was used at the driveway for the purpose of keeping the area safe for traffic under conditions of snow or ice or both, and therefore these parameters are not considered COCs.

4.3 Sediment COC

No sediment or surface water is present at the site.

5 Exposure Pathways

5.1 Human Health Exposure Pathways

The soil and groundwater analytical results indicated that all tested parameters were either non-detect, or were detected at concentrations below the applicable MECP (2011) Table 2 SCS, as such information regarding human health receptors and exposure pathways is not required.

5.2 Ecological Exposure Pathways

The soil and groundwater analytical results indicated that all tested parameters were either non-detect, or were detected at concentrations below the applicable MECP (2011) Table 2 SCS, as such information regarding ecological receptors and exposure pathways is not required.

Appendix G – Phase Two Conceptual Site Model (RSC Parcel)

Phase Two Conceptual Site Model – 84, 90 High Street East and 17, 19 Ann Street, Mississauga, ON

This section presents a Phase Two Conceptual Site Model (P2CSM) providing a narrative, graphical and tabulated description integrating information related to the Site geologic and hydrogeologic conditions, areas of potential environmental concern/potential contaminating activities, the presence and distribution of potential contaminants of concern, contaminant fate and transport, and potential exposure pathways. These components are discussed in the following sections. The Phase Two CSM was completed in accordance with O. Reg.153/04 as defined by the Ministry of the Environment, Conservation, and Parks (MECP).

1. Introduction

The Site is municipally known as 84, 90 High Street East and 17, 19 Ann Street in Mississauga. It is located on the west side of Hurontario Street and is bound by High Street East, Park Street East and Ann Street, as shown on Figure 1. Based on a review of historical records, the Site was first developed circa 1909 for residential use. Currently, the Site consisted of one (1) commercial building, three (3) residential buildings. The Site measures approximately 0.45 hectares (1.12 acres). The areas surrounding the Site consist of community property to the north, residential properties to the east, commercial properties to the south and west and a landscaped park to the northeast.

Refer to Table 1 for the Site identification information.

Table 1: Site Identification Information

Municipal Address	84, 90 High Street East, 17, 19 Ann Street, Mississauga, Ontario
Current Land Use	Residential / Commercial
Proposed Land Use	Residential
Legal Description	PT LT 1, PL PC2 ECR, S/S PARK ST AS IN RO660261; MISSISSAUGA PT LT 1, PL PC2 ECR, S/S PARK ST AS IN RO1128856; MISSISSAUGA PT LT 1, PL PC2 ECR, N/S HIGH ST AS IN RO768460; MISSISSAUGA PT LT 1, PL PC2 ECR, N/S HIGH ST AS IN RO998249; MISSISSAUGA
Property Identification Number(s) (PIN)	13463-0015 (LT) 13463-0016 (LT) 13463-0034 (LT) 13463-0035 (LT)
Approximate Universal Transverse Mercator (UTM) coordinates	NAD83 17T 614395 m E 4823530 m N
Accuracy Estimate of UTM	10-15 m
Site Area	0.45 hectares (1.12 acres)

Property Owners, Owner Contact and Address	Property Owner: 10 West Go GP Inc. Contact: Mr. Anthony Di Santo Address: 141 Lakeshore Road East, ON L5G 1E8

2. Potentially Contaminating Activities and Areas of Potential Environmental Concern

2.1 Potentially Contaminating Activities

A Phase One ESA, in accordance with O.Reg.153/04, was conducted by EXP in January 2021 for the Phase One Property. A total of twenty-nine (29) off-Site potentially contaminating activities (PCAs) were identified within 250 m from the Phase One Property Site boundaries. Furthermore, during our Phase Two subsurface investigation, two (2) additional on-Site PCAs were identified. All thirty-one (31) PCAs that were identified within 250 m property are shown on Figure 2. Each PCA was further evaluated to determine if the activity may be contributing to an area of potential environmental concern (APEC) at the Phase One Property.

The QP determined that select PCAs may contribute to an APEC for the property, while several PCAs were determined to not contribute to an APEC at the Phase One Property/Site due to various factors including, but not limited to, relative distance to the Phase One Property/Site, orientation to the Phase One Property/Site; degree and nature of PCA operations, potentially impacted media, etc. Refer to Table 2 for the evaluation of the PCAs in the Phase One Study Area.

Table 2: Potentially Contaminating Activities in the Phase One Study Area

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
Site					
1*	84, 90 High Street East and 17, 19 Ann Street	On-Site	PCA #30 – Importation of Fill Material of Unknown Quality	During our Phase Two subsurface investigation, fill material was encountered at the boreholes in the southern and western portions of the Site.	Yes, based on the PCA occurring on-Site.
2*	The paved driveways/walkways at 84, 90 High Street	On-Site	PCA # Other – Use of De-icing and Salting Substances	The southern portion of the site was developed with private driveways; de-icing and salting substances were thought to be routinely applied throughout the driveways surface, during the winter months for vehicular and pedestrian safety. The use of road salt at the Site is considered a PCA	Yes, based on the PCA occurring on-Site.
Surrounding Properties					

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
3	88 Park Street East	20 m north	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products.	Based on the reviewed FIP, the property was occupied by W.H. Thompson, which is a lumber yard, it is noted that one (1) underground storage tanks (USTs) is present on the east-central portion of the property, approximately 65 m north of the Site.	Yes, based on the close proximity of the lumber yard to the site. However, the UST is not considered to contribute to an APEC due to the separation distance from the site.
4	76 & 78 Queen Street East	125 m north	PCA#46 – Rail Yards, Tracks and Spurs.	Based on the reviewed FIP, the property was occupied by C.N.R Port Credit Station.	No, based on the separation distance to the Site.
5	136 Lakeshore Road East	65 m south	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, the property was occupied by Bruce MacDougall Motors, it is noted that a paint shop is present on the property and that two (2) underground storage tanks (USTs) are present on the northwest portion of the property, approximately 70 m south of the Site.	No, based on the inferred hydraulically down-gradient location relative to the Site.
6	114 Lakeshore Road East	105 m southwest	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, ERIS Report and City Directories, the property was occupied by various gasoline service stations, it is noted that three (3) underground storage tanks (USTs) are present on the southwest portion of the property in the 1952 FIP and four (4) USTs are listed in the ERIS Report.	No, based on the inferred hydraulically down-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
7	139 Lakeshore Road East	145 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA 'Other' – Use and storage of Coal.	Based on the reviewed FIP, the property was occupied by St. Lawrence Starch Co. Limited, it is noted to be fueled by coal, with one (1) coal bin and an area labelled large coal piled. Additionally, five (5) corn oil tanks, two (2) fuel oil underground storage tanks (USTs) and one (1) gasoline UST are present.	No, based on the inferred hydraulically down-gradient location relative to the Site.
8	144 Lakeshore Road East	75 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, the property was occupied by a gasoline service station, it is noted to have two (2) greasing portions in the building and that four (4) USTs are present on the east portion of the property, approximately 130 m southeast of the Site.	No, based on the inferred hydraulically down-gradient location relative to the Site.
9	156 Lakeshore Road East	150 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, the property was occupied by a gasoline service station, it is noted as greasing in the building and that three (3) USTs are present on the east portion of the property, approximately 175 m southeast of the Site	No, based on the inferred hydraulically down-gradient location relative to the Site.
10	162 & 170 Lakeshore Road East	210 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed FIP, the property was occupied by Elmwood Motors and a gasoline service station, it is noted to have a greasing portion in the building and that three (3) USTs are present on the south portion of the property, approximately 240 m southeast of the Site.	No, based on the inferred hydraulically down-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
11	80 High Street East	15 m west	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the record review, the property was listed as having one (1) double wall 5000 L fuel oil underground storage tank installed in 2014. The location of the UST is approximately 30 m southwest of the Site.	Yes, based on the close proximity to the site and occupancy since at least the 1950s.
12	150 Lakeshore Road East	75 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Based on the reviewed ERIS Report and City Directories, the property was occupied by Pioneer Petroleum's, Pioneer Gas & Car Wash, R & L Auto Glazing and Pioneer Gas & Wash Centre between 1972/73 to present. The property was listed as having between four (4) and six (6) gasoline/diesel underground storage tanks (USTs).	No, based on the inferred hydraulically down-gradient location relative to the Site.
13	20 Rosewood Avenue	85 m east	PCA 'Other' – Spill of diesel fuel.	Based on the reviewed ERIS Report, Greenspoon Specialty Contracting Ltd. reported a spill of 500 L of diesel and water to the ground from an underground tank in 2010, with soil contamination confirmed.	No, based on the separation distance and inferred hydraulically trans-gradient location relative to the Site.
14	Hurontario Street and Lakeshore Road East	115 m south	PCA 'Other' – Spill of diesel fuel.	Based on the reviewed ERIS Report, Karbro Transport Inc. reported a spill of 100 L of diesel fuel to the road and catch basin in 2011, with possible surface water contamination.	No, based on the inferred hydraulically down-gradient location relative to the Site.
15	152 Lakeshore Road East	75 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks. PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.	Based on the reviewed ERIS Report, the property was occupied by Parkland Fuel Corporation and was listed as a registered waste generator of oil skimmings & sludges and light fuels in 2017.	No, based on the inferred hydraulically down-gradient location relative to the Site.
16	158 Lakeshore Road East	150 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, the property was occupied by Beaver Fuels Management and was listed as a gasoline service station and having five (5) expired fuel tanks in 1992.	No, based on the inferred hydraulically down-gradient location relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
			PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.		
17	145 Lakeshore Road East	160 m southeast	PCA#20 – Explosives and Ammunition Manufacturing, Production and Bulk Storage.	Based on the reviewed ERIS Report, the property was occupied by Nordex Explosives Ltd. and was listed as an 'Explosives Manufacturing' company in the business directories.	No, based on the inferred hydraulically down-gradient location relative to the Site.
18	141 Lakeshore Road East	145 m southeast	PCA#55 – Transformer Manufacturing, Processing and Use. PCA 'Other' – Spill of petroleum product. PCA 'Other' – Starch manufacturing.	Based on the reviewed ERIS Report, the property was occupied by St. Lawrence Starch Co. and was listed as a PCB storage from transformers and ballasts. They also reported a spill of 100 L oil from a hoist during concrete removal, with soil contamination confirmed. Additionally, they were listed as a registered waste generator of various wastes including; petroleum distillates and oil skimmings & sludges from 1986 to 2003.	No, based on the inferred hydraulically down-gradient location relative to the Site.
19	20 Forest Avenue	160 m east	PCA 'Other' – PCB storage.	Based on the reviewed ERIS Report, the property was occupied by Mississauga Hydro (PCB) and was listed as a registered waste generator from 1990 to 1994; however, no wastes were defined.	No, based on the inferred hydraulically trans-gradient location relative to the Site.
20	Currently 33 Compass Way (former St. Lawrence Starch Factory property)	190 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714522) database for the property.	No, based on the separation distance relative to the Site.
21	160 Lakeshore Road East	195 m southeast	PCA#10 – Commercial Autobody Shops PCA#52 – Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain	Based on the reviewed ERIS Report, the property was occupied by Stephensons Rent All Ltd. was listed as a registered waste generator of petroleum distillates, light fuels, oil skimmings & sludges and waste oils & lubricants from 1988 to 2003; and halogenated solvents from 1989 to 2003.	No, based on the separation distance relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)[1]	Potentially Contaminating Activity (PCA)[2]	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
			transportation systems.	Based on the city directories, G&M Autmotive Service Centre and Perma Shine were located at the property in 1977/78. Additionally, based on the Site visit observations the property was occupied by Midas, an auto repair shop.	
22	Currently 24 Compass Way former St. Lawrence Starch Factory property)	200 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714518) database for the property.	No, based on the separation distance relative to the Site.
23	Currently 34 Compass Way former St. Lawrence Starch Factory property)	195 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714524) database for the property.	No, based on the separation distance relative to the Site.
24	Currently 25 Compass Way former St. Lawrence Starch Factory property)	195 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714517) database for the property.	No, based on the separation distance relative to the Site.
25	Currently 15 Compass Way former St. Lawrence Starch Factory property)	200 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714519) database for the property.	No, based on the separation distance relative to the Site.
26	111 Lakeshore Road East	200 m southwest	PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used).	Based on the reviewed ERIS Report, the property was occupied by Seaway Cleaners, Rosalnaaz Investments Inc. and 2088466 Ontario Limited and were listed as a registered waste generator of halogenated solvents from 1999 to 2008. Additionally, Seaway Cleaners was listed on the Dry-Cleaning Facilities in 2004 with 234 kg of perchloroethylene noted.	No, based on the separation distance relative to the Site.
27	103 Lakeshore Road East	225 m southwest	PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used).	Based on the reviewed ERIS Report and City Directories, the property was occupied by Seaway Cleaners, and was listed as a registered waste generator of halogenated solvents from 1986 to 2000.	No, based on the separation distance relative to the Site.
28	Currently 9 Compass Way	200 m southeast	PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks.	Based on the reviewed ERIS Report, a petroleum tank was listed on the Aboveground Storage Tank (OFG ID: 1200714513) database for the property.	No, based on the separation distance relative to the Site.

PCA Identifier	Address	Location of Activity (in location to Site)(1)	Potentially Contaminating Activity (PCA)(2)	Approximate timeline that PCA occurred	Contributes to APEC (Yes or No)?
	(former St. Lawrence Starch Factory property)				
29	99 Lakeshore Road East	230 m southwest	PCA 'Other' – Spill of petroleum product.	Based on the reviewed ERIS Report, a spill was reported for the property of an unknown amount of fuel in 2002, with soil contamination confirmed.	No, based on the separation distance relative to the Site.
30	27 Helene Street North	115 m northwest	PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used).	Based on the city directories, Sheridan Cleaners, Sheridan Drycleaners & Launderers and Kwik Kleen Drycleaners were located at the property between 1972 and 2000.	No, based on the separation distance relative to the Site.
31	102 Lakeshore Road East	200 m southwest	PCA#37 – Operation of Dry Cleaning Equipment (where chemicals are used).	Based on the city directories, Holiday Cleaners was located at the property in 1972/73.	No, based on the separation distance relative to the Site.

*Additional PCAs identified during this Phase Two ESA.
(1) These are approximate distances taken from the Site boundaries.
(2) Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg 153/04, as amended) that is occurring or has occurred in a phase one Study area.

2.2 Areas of Potential Environmental Concern

Based on the evaluation of the PCAs located within the Phase One Study Area, areas of potential environmental concern (APECs) were identified, as presented in Figure 4, and summarized in Table 3 below.

Table 3: Areas of Potential Environmental Concern (APECs)

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)(1)	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1*: Fill of Unknown Quality	Southern Portions of the Site	PCA1: # 30 Importation of Fill Material of Unknown Quality	On-Site	PAHs and Metals, B-HWS, Cr (VI), Hg, As, Sb, Se	Soil

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)[1]	Location of PCA (on-Site or off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 2**: Application of De-icing and Salting Substances in the Driveways	Southern Portion of the Site (pavement area)	PCA2: # Other – Use of De-icing and Salting Substances	On-site	Soil: EC and SAR	Soil
APEC 3: Lumber yard located to the immediate north of the site, including chemical extraction (88 Park Street East)	Northern Portion of the Site	PCA 3: #59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Off-Site	Metals, CPs, VOCs	Groundwater
APEC 4: UST at neighbouring property (80 High Street East)	Western Portion of the Site	PCA 11: #28- Gasoline and Associated Products Storage in Fixed Tanks (PCA 8)	Off-Site	PHCs, BTEX	Groundwater

*Fill material was encountered at the boreholes in the southern portions of the Site during the Phase Two ESA.

** The southern portion of the site was developed with private driveways; de-icing and salting substances were thought to be routinely applied throughout the driveways surface, during the winter months for vehicular and pedestrian safety. The use of road salt at the Site is considered a PCA, leading to an APEC.

[1] Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D (O.Reg 153/04, as amended) that is occurring or has occurred in a phase one Study area.
VOCs = volatile organic compounds; PHCs = petroleum hydrocarbons; PAHs = polycyclic aromatic hydrocarbons; BTEX = benzene, toluene, ethylbenzene and xylenes; Sb = antimony; As = arsenic; Se = selenium, B-HWS = boron hot water soluble; CrVI = chromium VI; Hg = mercury, CN = cyanide; EC = electrical conductivity, SAR = sodium adsorption ratio; CPs = Chlorophenols

Refer to Figure 4 for the location of APECs on the Site. Boreholes/monitoring wells advanced on the Site to investigate the identified APECs are shown on Figure 5A. Figure 5B shows the locations of boreholes/monitoring wells with respect to the APECs on the Site.

2.3 Underground Utilities

The Site utilities and services were identified at the Site based on information provided in environmental records and relevant utility infrastructure observed during the Site reconnaissance. The Site utilities are summarized in the table below and noted on Figure 3, where available. It is noted that the precise underground location of the utilities cannot be determined without professional locate services. No COC was identified at the Site; therefore, there is no potential risk of contaminants migration due to subsurface structure and underground utilities.

Table 4: Site Utilities

Utility	Source	Location	Site Entry
Natural Gas	Enbridge Gas	Unknown	N/A
Sanitary Sewer	City of Mississauga	Unknown	N/A

Utility	Source	Location	Site Entry
Storm Sewer	City of Mississauga	Unknown	N/A
Water	City of Mississauga	Unknown	N/A
Electricity	Toronto Hydro	Unknown	N/A
Telecommunications	Unknown	Unknown	N/A

3. Physical Site Description

3.1 Geological and Hydrogeological Conditions

The Site and surrounding areas are expected to consist of Deltaic and Lacustrine Deposits predominantly gravelly sand and silty sand. The bedrock in the general area of the Site is part of a group belonging to the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member and Eastview Member consisting of shale, limestone, dolostone and siltstone.

A review of the topographic map indicated that the Lake Ontario is located approximately 350 m south of the Site. Based on local topography the inferred groundwater flow direction is expected to flow to the south/southeast toward Lake Ontario.

Based on the review of available resources from the Ministry of Natural Resources and Forestry website on December 3, 2021, no areas of natural significance were identified at the Site or within 30 m of the Site. In addition, based on the review of the available resources, no water well is located at the Site.

The general stratigraphy at the Site, as observed in the boreholes, consisted of asphalt/topsoil at the surface generally overlying layers of fill, followed by sandy silt and clayey silt till. Bedrock was encountered at depths ranging from 7.44 mbgs and 9.14 mbgs. A brief description of the soil stratigraphy at the Site, in order of depth, is summarized in the following sections.

A cross section plan is provided as Figure 5A. Cross Sections showing the general stratigraphy of the Site is presented in Figures 17 and 18.

3.1.1 Surface Material

Asphalt was encountered at BH2, BH3D, BH3S, BH4, BH8 and BH9 with a thickness of ranging between 0.025 m and 0.05 m, overlaying layers of granular base with a thickness ranging between 0.125 m and 0.53 m.

Topsoil was encountered at BH1 and BH10 with thickness ranging between 0.15 m and 0.30 m.

3.1.2 Fill Material

Fill was encountered in six (6) boreholes (BH3D, BH3S, BH4, BH8, BH9 and BH10). The fill typically consisted of brown clayey silt, sandy silt with trace clay, rootlets and black sand. This layer extended to depths varying from 0.90 to 2.57 m below the existing ground surface.

The reworked material was found below topsoil/asphalt (with granular base) in BH1 and BH2.

3.1.3. Native Material

Sandy silt was encountered in BH1, BH3D and BH3S, below the fill material. The silty sand contained some clay and extended to depths varying from 1.68 m bgs to 2.29 m bgs.

Clayey Silt Till was encountered in BH1, BH2, BH3D, BH3S, BH4, BH8, BH9 and BH10 below the sandy silt layer of fill material. The clayey silt contained trace sand and gravel. This layer extended to depths varying from 7.44 m bgs to 9.14 m bgs.

3.1.4 Bedrock

Bedrock was encountered at depths ranging from 7.44 mbgs and 9.14 mbgs, at boreholes (BH1, BH2, BH3D and BH4).

3.2 Hydrogeology

Taking into consideration of the local topography and surface water features in the surrounding area, the regional groundwater flow direction is inferred to be southerly to southeasterly towards the Lake Ontario. Based on the groundwater contour map delineated for the Site, the groundwater is anticipated to flow in a northwest direction. However, please notes that the direction of localized groundwater flow may be influenced by disturbed soil (fill or reworked material), underground utilities and/or underground building structures in the area. As such, the measured groundwater flow direction may not be representative of the regional area.

A groundwater contour map is presented in Figure 6. Refer to Table 5 for the Site hydrogeology characteristics based on groundwater monitoring observations.

Table 5: Site Hydrogeology Characteristics

Location	Observation
Depth to Groundwater[1]	3.79 m bgs to 8.36 m bgs
Groundwater Elevation[1]	74.36 m asl to 77.17 m asl
(Measured) Direction of Groundwater Flow	Northwesterly
Direction of Regional Groundwater Flow	Southerly to Southeasterly
Horizontal Hydraulic Gradient[2]	0.072 m/m (between MW1 and MW2) and 0. 045 m/m (between MW1 and MW3S)

[1] Depth to groundwater reported for monitoring wells with screen intervals straddling the water table.
[2] horizontal hydraulic gradients calculated based upon data collected on July 15, 2021.
m asl = meters above sea level

3.3 Site Sensitivity

The Site Sensitivity classification with respect to the conditions set out under Sections 35, 41 and 43.1 of O.Reg.153/04 were evaluated to determine if the Site is sensitive, as presented in Table 6.

Table 6: Site Sensitivity

Sensitivity	Classification	Does Sensitivity Apply to Site?
Section 35 applies if	(i) The full depth generic site condition standards in a non-potable groundwater condition	No
	(ii) The stratified site condition standards in a non-potable groundwater condition	No
	(iii) The property, and all other properties located, in whole or in part, within 250 metres of the boundaries of the property, are supplied by a municipal drinking water system	Yes

Sensitivity	Classification	Does Sensitivity Apply to Site?
	(iv) The record of site condition does not specify agricultural or other use as the type of property use	Yes
	(v) The property is located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater	No
	(vi) The property or one of the properties in the phase one study area has a well used or intended for use as a source of water for human consumption or agriculture.	No
	(vii) A person authorized by the owner of a property has given the clerk of the municipality a written notice of intention to apply the standards in preparing a record of site condition for the property.	No
Section 41 applies if	(i) property is within an area of natural significance	No
	(ii) property includes or is adjacent to an area of natural significance or part of such an area (City of Toronto's Environmental Significant Area)	No
	(iii) property includes land that is within 30 m of an area of natural significance or part of such an area (City of Toronto's Environmental Significant Area)	No
	(iv) soil at property has a pH value for surface soil less than 5 or greater than 9	No
	(v) soil at property has a pH value for sub-surface soil less than 5 or greater than 11	No
	(vi) a qualified person is of the opinion that, given the characteristics of the property and the certifications the qualified person would be required to make in a record of site condition in relation to the property as specified in Schedule A, it is appropriate to apply this section to the property	No
Section 43.1 applies if	(i) property is a shallow soil property	No
	(ii) property includes all or part of a water body or is adjacent to a water body or includes land that is within 30 m of a water body	No

3.4 Current and Proposed Property Use

It is understood that the Site is intended to be re-developed for mixed-use residential/commercial land use. It is understood that the redevelopment will include a high-rise residential building, two (2) to twenty-two (22) storeys high, with ground floor commercial and four (4) levels of underground parking. The lowest level (P4) will be at approximately 12.5 metres below ground surface (mbgs) at the north-west portion of the site.

4. Contaminants of Concern

For assessment purposes, the MECP (2011) Table 2: Full Depth Generic Site condition Standards in a Potable Ground Water Condition for Residential/Parkland/Institutional Property Use and medium and fine textured soil was considered applicable for determining contaminants of concern (COCs), based on the rationale presented in Table 7.

Table 7: Site Condition Standards

Description	Site Specific Condition
Section 35 Site Sensitivity	Not Applicable • Potable Site Condition Standards has been applied for the Site.
Section 41 Site Sensitivity	Not applicable • The soil at the Site has pH values between 5 and 9 for surficial soil; and, between 5 and 11 for subsurface soil. • The Site is not located within, and/or located adjacent to an area of natural significance/an environmentally sensitive area.
Section 43.1 Site Sensitivity	Not applicable • The Site is not considered a shallow soil property, based on the recovered soil cores, which indicated that more than two-thirds of the Site has an overburden thickness in excess of 2 m. • The Site is not located within 30 m of a surface water body
Land Use	Residential/Parkland/Institutional • The proposed future use of the Site is for residential land use.
Soil Texture	Medium to fine textured • The predominant texture of soils at the Site is considered to be fine, based on grain size analysis and soil characteristics identified in the borehole logs and 75 micron sieve.

A summary of the assessment of each pCOC within each APEC and soil and groundwater analytical results are presented on plan view on Figures 7 through 16.

The Phase Two ESA were completed to assess the impacts of the PCAs on soil and groundwater within the four (4) APECs identified on-site. A summary of the assessment of APECs is provided in Table 8.

Table 8: Summary of Subsurface Assessments

APEC	Location of APEC on Phase Two Property	PCA[1]	Location of PCA	pCOC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 2 SCS)
APEC 1	Southern portion of the Site	(30) Importation of Fill Material of Unknown Quality	On-site	Soil: PAHs and Metals, B-HWS, Cr (VI), Hg, As, Sb, Se	Five (5) boreholes (BH3D, BH4, BH8, BH9, and BH10) was advanced within APEC 1. Soil: Soil samples were collected from BH3D, BH4, BH8, BH9, and BH10, at depths ranging from 0.04 to 1.4 mbgs and analyzed for PAHs. Soil samples were collected from BH4, BH8, BH9, and BH10at depths ranging from 0.04 to 2.13 mbgs and analyzed for Metals, B-HWS, Cr (VI), Hg, As, Sb, Se. Please notes that CN- was analyzed at BH10 at depth of 1.52 to 2.13 mbgs to assess the general background quality of soil. The cyanide is a pCOC in the identified APECs within the Site.	Soil: No exceedance was identified in the soil samples.
APEC 2	Southern Portion of the Site (pavement area)	(other) de-icing activities	On-Site	Soil: EC and SAR	Five (5) boreholes (BH3D, BH4, BH8, BH9, and BH10) was advanced within APEC 2. Soil: Soil samples were collected from BH3D, BH4, BH8, BH9, and BH10, at depths ranging from 0.04 to 2.13 mbgs and analyzed for EC and SAR.	Soil: Sodium Adsorption Ratio in sample BH8 SS1/SS2 exceed Table 2 SCS. *The elevated EC and SAR in soil is likely associated with road salt application on the paved parking lot for road safety of vehicular or pedestrian traffic under conditions of snow or ice or both. As such, the elevated EC and SAR in soil is deemed not to be exceeded the Table 2 SCS based on the section 49.1 of O.Reg. 407/19.*

APEC	Location of APEC on Phase Two Property	PCA[1]	Location of PCA	pCOC and Media Affected	Phase Two Assessments	Current Status (Exceedances of Table 3 SCS)
APEC 3	Northern Portion of the Site	(59) Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Off-Site	Groundwater: Metals, CPs, VOCs	One (1) borehole with monitoring well (BH/MW1) were advanced within APEC 3. Groundwater: Groundwater sample was collected from BH/MW1 for metals, As, Sb, Se, VOCs, BTEX, CPs, and Na. Please notes that Na was not a pCOC of the identified APEC within the Site. The Na was analyzed together with metals and hydride metals in the laboratory.	Groundwater: No exceedance was identified in groundwater sample except the concentration of Na. *The elevated sodium is likely associated with road salt application on the adjacent roadways (Park Street East and Ann Street) for road safety of vehicular or pedestrian traffic under conditions of snow or ice or both. As such, the elevated sodium in groundwater is deemed not to be exceeded the Table 2 SCS based on the section 49.1 of O.Reg. 407/19.*
APEC 4	Western Portion of the Site	(28) Gasoline and Associated Products Storage in Fixed Tanks	Off-site	Groundwater: PHCs, BTEX	One (1) borehole with monitoring well (BH/MW3S) were advanced within APEC 3. Groundwater: Groundwater sample was collected from BH/MW3S for PHC, BTEX.	Groundwater: No exceedance was identified in groundwater sample.

4.1 Soil Impacts

A chemical constituent was selected as a potential COC (pCOC) if it identified as such in the Phase One ESA.

Soil samples were submitted for the analysis of PAHs, metals (including As, Sb and Se), B-HWS, Cr(VI), Hg, EC and SAR. All soil samples were either non-detect or detected below their applicable MECP (2011) Table 2 SCS with the following exceptions:

- Sodium Adsorption Ratio in sample BH8 SS1/SS2.

Soil analytical results are presented on plan view in Figures 7 through 11.

4.1.2 Deicing Salt Related Parameters in Soil

The identified impacts of SAR in soil is likely to be attributable to the application of de-icing salts at the driveways on-Site and/or salting of the adjacent municipal roadway (i.e. Ann Street, High Street) during winter months for the purpose of snow and ice removal. As such, it is the QP_{ESA}'s opinion that the applicable Table 2 SCS for SAR at the Site were exceeded solely because salt was used on the road for the purpose of keeping the road safe for traffic under conditions of snow or ice or both, and therefore is not considered as exceeding the Table 2 SCS per the exemption set out in Section 49.1 (1) of O. Reg. 153/04.

4.2 Groundwater Impacts

Groundwater samples were submitted for the analysis of of PHCs (including BTEX), VOCs, CPs and metals (including As, Sb and Se), Cr(VI), Hg and Sodium. All groundwater parameters were either non-detected or detected below their applicable MECP (2011) Table 2 SCS with the following exceptions:

- One groundwater sample (MW1 and its duplicate MW11) exhibited elevated level of sodium.

Groundwater analytical results are presented on plan view in Figures 12 through 16.

4.2.2 Deicing Salt Related Parameters in Groundwater

It is also noted that elevated sodium in the groundwater samples from MW1 and its duplicate (MW11) is related to the application of salting and de-icing substances at the driveway or adjacent roadways for the purpose of snow and ice removal during the winter months. As per Section 2 of Ontario Regulation 339 of the Revised Regulations of Ontario, 1990 (Classes of Contaminants - Exceptions), and Part IX, Subsection 49.1 of Ontario Regulation 153/04, the concentration of SAR is deemed not to be exceedances of the MECP Table 2 SCS. As such, it is the QP_{ESA}'s opinion that the applicable Table 2 SCS for sodium in groundwater at the site was exceeded solely because salt was used at the driveway for the purpose of keeping the area safe for traffic under conditions of snow or ice or both, and therefore these parameters are not considered COCs.

4.3 Sediment COC

No sediment or surface water is present at the site.

5 Exposure Pathways

5.1 Human Health Exposure Pathways

The soil and groundwater analytical results indicated that all tested parameters were either non-detect, or were detected at concentrations below the applicable MECP (2011) Table 2 SCS, as such information regarding human health receptors and exposure pathways is not required.

5.2 Ecological Exposure Pathways

The soil and groundwater analytical results indicated that all tested parameters were either non-detect, or were detected at concentrations below the applicable MECP (2011) Table 2 SCS, as such information regarding ecological receptors and exposure pathways is not required.